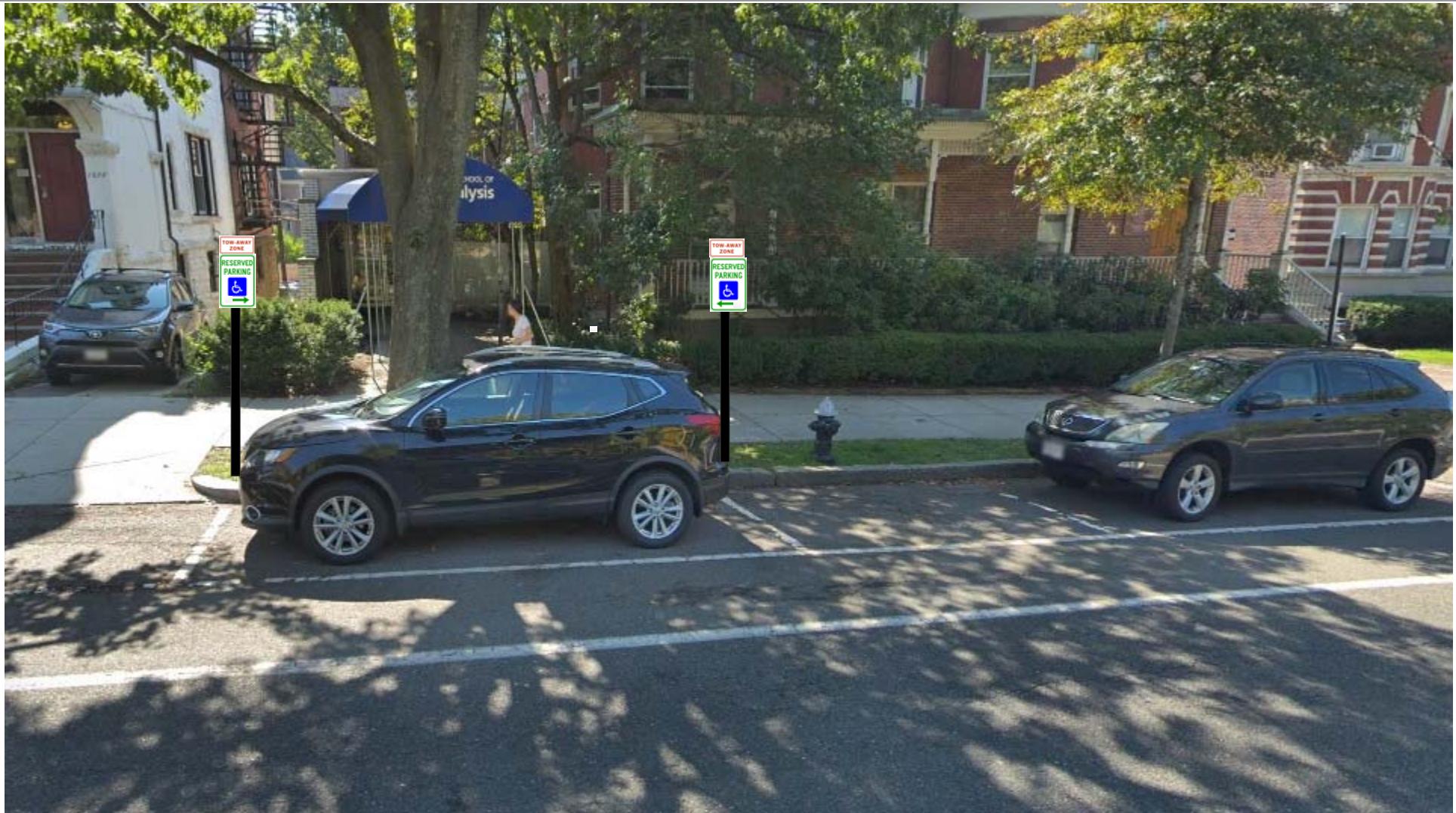
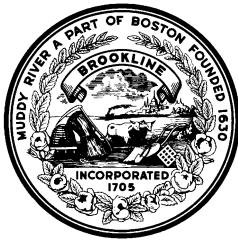


Attachment # 2

Proposed Location for Designated Curbside Handicap Parking Space



1581 Beacon St



TOWN of BROOKLINE
Massachusetts
 Department of Public Works

Erin Chute Gallentine
Commissioner

MEMORANDUM

TO: Transportation Board

FROM: Robert T King, PE
 Director of Engineering and Transportation

DATE: March 15, 2023

SUBJECT: March 15, 2023 Meeting of the Transportation Board

**Item # 5: DISCUSSION AND ACTION ON THE REQUEST BY KYLE NEUNER TO
 CREATE A HANDICAP PARKING TOW AWAY ZONE CURB SIDE SPACE IN THE
 VACINCITY OF 1581 BEACON ST**

Kyle Neuner, on behalf of Boston Graduate School of Psychoanalysis, submitted a request for a designated curbside handicap parking space at 1581 Beacon St (attachment # 1). Boston Graduate School of Psychoanalysis (1581 Beacon Street) has multiple faculty members and patients who have handicap parking placards and are often unable to find a nearby parking spot. Therefore, they are seeking the installation of a designated curbside handicap parking space in front of 1581 Beacon St.

Staff is supportive of the request based on observations that the Handicap Parking Space at 1583 Beacon Street is frequently occupied.

DPW RECOMMENDATION:

DPW – Transportation Division staff recommend that the Transportation Board vote to alter the Traffic Rules and Regulations to create a Designated Curbside Handicap Parking Space on Beacon Street in the vicinity of 1581 Beacon Street.

*Attachments: 1) Request for a Designated Curbside Handicap Parking Space
 2) Proposed Location of the Space*

1.

From: Kyle Neuner <neunerk@bgsp.edu>
Sent: Friday, February 10, 2023 4:12 PM
To: Hanna Mansfield <hmannsfld@brooklinema.gov>; Priscilla Ayati <payati@brooklinema.gov>
Subject: Disability Parking Permit--non-residential

Good afternoon,

I am writing to inquire whether there is a way to apply for a curbside disabled parking space out front of a non-residential location. I see on the Transportation Division website the application for such a permit for a disabled person's residence, and I wonder whether there is a similar process for a commercial property. For more context, our institution, Boston Graduate School of Psychoanalysis (1581 Beacon Street) has multiple faculty members and patients who have disabled persons parking placards and are often unable to find a nearby parking spot (though there is one reserved disabled spot very nearby).

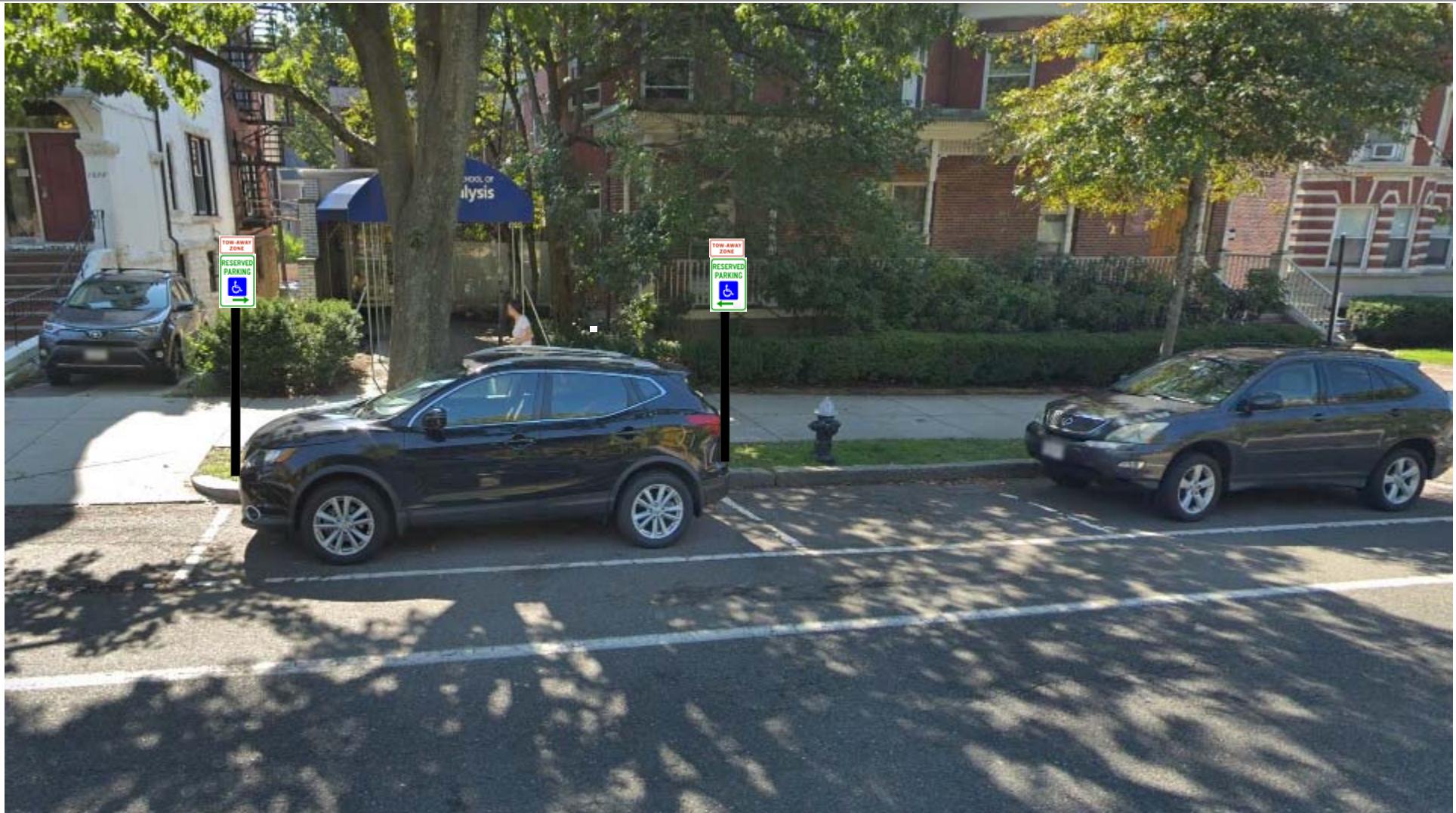
I would greatly appreciate any information you might be able to offer on whether there is a process in place. Thanks so much.

All the best,

Kyle Neuner
Staff Accountant
Boston Graduate School of Psychoanalysis

Attachment # 2

Proposed Location for Designated Curbside Handicap Parking Space



1581 Beacon St



TOWN of BROOKLINE
Massachusetts
 Department of Public Works

Erin Chute Gallentine
 Commissioner

MEMORANDUM

TO: Transportation Board

FROM: Robert T King, PE
 Director of Engineering and Transportation

DATE: March 13, 2023

SUBJECT: March 15, 2023 Meeting of the Transportation Board

**Item # 7: DISCUSSION AND ACTION ON THE REQUEST BY NED SEBELIUS FOR
 MARKED CROSSWALKS AND ALL WAY STOP CONTROL AT THE GARDNER ROAD
 AT WINTHROP ROAD AND WELLAND RD INTERSECTION.**

Ned Sebelius, a resident of 87 Gardner Road, has requested the installation of crosswalks and stop signs for the Gardner Road at Winthrop Road and Welland Road intersection to increase pedestrian safety. Staff conducted the attached Gardner Road at Winthrop Road and Welland Road Crosswalk and All-Way Stop Study to determine if crosswalks and/or all-way stop controls are warranted based on the criteria contained within the Town's Crosswalk Policy Guidelines and MUTCD guidelines. The report recommends favorable action for the installation of three crosswalks; on Gardner Road between Welland and Winthrop and on the Winthrop and Welland legs of the intersection. The report does not recommend all-way stop control for the intersection, but does recommend stop control be added for the Hancock Road approach, which was included in the assessment. Installation of "Cross Traffic Does Not Stop" signs are recommended for the Welland and Winthrop approaches which operate under stop control. "No Parking" signs are recommended within the intersection to formalize the existing regulation that restricts parking within an intersection. This will improve visibility of the crosswalks and for drivers navigating the intersection. However, note that the timeline for the sidewalk installation will be dependent on available funding through the Department's sidewalk contract.

DPW RECOMMENDATION:

DPW – Transportation Division staff recommend that the Transportation Board vote to install: three crosswalks in the aforementioned locations at the intersection of Gardner Road at Winthrop and Welland Road; stop control for the Hancock Road approach; and no parking signs within the intersection.

Attachments: 3) Resident Request

Attachments: 4) Gardner Rd at Winthrop Rd and Welland Rd Crosswalk and All-Way Stop Study

Attachments: 5) Gardner Road at Winthrop and Welland Road Study Appendix

Daniel Martin

From: Todd Kirrane
Sent: Monday, July 22, 2019 4:39 PM
To: Daniel Martin
Subject: FW: Crosswalks/stop signs at Winthrop and Gardner intersection

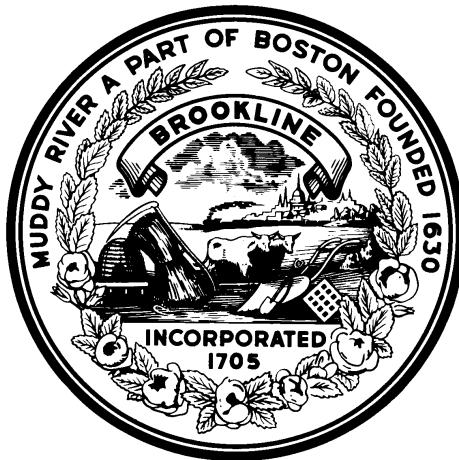
Todd Kirrane
Transportation Administrator
Town of Brookline, MA
www.brooklinema.gov/transportation
www.twitter.com/BlineTransport
www.facebook.com/BrooklineDPW

-----Original Message-----

From: Ned Sebelius [mailto:nsebelius@gmail.com]
Sent: Friday, December 07, 2018 11:28 AM
To: Todd Kirrane
Cc: Lisa Rockefeller
Subject: Crosswalks/stop signs at Winthrop and Gardner intersection

Hi Todd,

I'm here in the office at townhall and they have told me to email you about our interest in getting stop signs and cross walks put in at the intersection of Gardner Road and Winthrop. We live at 87 Gardner Road and have a number of children on our block who have to cross that intersection to walk to Pierce. The five-way intersection there has only two stops signs and we get a lot of speeding traffic with no safe place to cross.



TOWN OF BROOKLINE

**Department of Public Works
333 Washington Street
Brookline, MA 02445-6863**

Crosswalk and Stop Control Assessment For Gardner Road at Welland Road and Winthrop Road Intersection

Date: March, 2023

Overview

The purpose of this study is to determine if marked crosswalks and all-way stop controls are warranted for the Gardner Road at Welland, Winthrop, and Hancock Road intersection. The study was initiated by a resident request. A copy of the request can be found in the **Appendix**. The study location can be seen in **Figure 1**.

Recommendations for a crosswalk will be based on the guidelines found in the latest Town of Brookline Department of Public Works Crosswalk Policy and Design Guidelines. The Crosswalk Policy and Design Guidelines suggest all the following factors should be satisfied for a crossing to be installed on an uncontrolled approach to an intersection:

1. The speed limit and 85th percentile speed is 40 mph or less;
2. There are 20 or more pedestrians using the crossing per hour during the peak AM and PM periods of vehicular traffic (lesser volumes may be considered if a large percentage of the pedestrian population consists of young, elderly, or disabled pedestrians);
3. The average daily traffic for the roadway must exceed 3,000 vehicles per day;
4. A sidewalk or adequate shoulder for use by pedestrians, or a distinct pedestrian destination such as a recreation field, must exist on both sides of the roadway;
5. Another crosswalk across the same roadway cannot exist within 200 ft of the proposed location;
6. Adequate stopping sight distance must be available in both directions determined in accordance with A Policy on the Design of Highways and Streets standards.

Recommendations for all-way stop control will be based on the latest Manual of Uniform Traffic Control Devices (MUTCD). The MUTCD suggests the following factors be considered for the installation of intersection controls; vehicular, bicycle, and pedestrian traffic volumes on all approaches, approach speeds, vehicle delay, available sight distance, and reported crash experience.

In addition, multi-way stop applications in the MUTCD suggest the following:

- A. Where traffic control signals are justified, the multi-way stop is an interim measure.
- B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such as right-turn and left-turn collisions as well as right-angle collisions.
- C. Minimum Volumes: (Volume on the intersecting roads should be approximately equal)
 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day;
 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
 3. If the 85th percentile approach speed for the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values in items 1 and 2.
- D. Where no single criterion is satisfied, but where criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.
- E. The need to control left-turn conflicts.

2.

Gardner Rd at Winthrop Rd, Welland Rd, and Hancock Rd

Brookline, Massachusetts



BROOKLINE ENGINEERING/TRANSPORTATION DIVISION
333 WASHINGTON ST 4TH FLOOR, BROOKLINE, MA
TELEPHONE : (617) 730-2177 FAX: (617) 264-6450



Figure 1

Study Location

- F. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes.
- G. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop.
- H. An intersection of two residential neighborhood collector streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

Existing Conditions

Roadways

Gardner Road is classified by the Massachusetts Department of Transportation (MassDOT) as a local road under Town Jurisdiction. The roadway generally runs in an east-west direction and provides a connection between Washington Street and Tappan Road. Gardner Road provides one travel lane in each direction. The pavement width is approximately 27' with sidewalks on both sides of the street near the study area. The statutory speed limit is 25 mph. Land use along Gardner Road is primarily residential.

Winthrop Road is classified by MassDOT as a local road under Town Jurisdiction. The roadway generally runs in a north-south direction and provides a connection between Beacon Street and Gardner Road. Winthrop Road provides one travel lane in each direction. The pavement width is approximately 25' with sidewalks on both sides of the street near the study area. The statutory speed limit is 25 mph. Land use along Winthrop Road is primarily residential.

Welland Road is classified by MassDOT as a local road under Town Jurisdiction. The roadway generally runs in a north-south direction and provides a connection between Gardner Road and Tappan Street. Welland Road provides one travel lane in each direction except where is one way southbound from Stanton Road to Tappan Street. The pavement width is approximately 23' and sidewalks are on both sides of the street near the study area. The statutory speed limit is 25 mph. Land use along Welland Road is primarily residential, and also includes the Brookline High School.

Hancock Road is classified by MassDOT as a local road under Town jurisdiction. The roadway generally runs in a north-south direction and provides a connection between Hancock Road and Waybridge Lane. Hancock Road provides one travel lane in each direction. The pavement width is approximately 22' with sidewalks on both sides of the street near the study area. The statutory speed limit is 25 mph. Land use along Winthrop Road is primarily residential.

Intersections

Gardner Road meets Welland, Winthrop, and Hancock Road to form an offset, unsignalized five-way intersection. The Gardner Road and Hancock Road approaches operate freely with no control. The Welland Road and Winthrop Road approaches operate under stop control. The intersection approaches all provide one general purpose travel lane. Land use at the intersection consists of residential housing. Marked crosswalks are not provided at the intersection.

A street light is located on the northeast corner of the intersection.

Speed Study

Vehicle speeds were obtained on Gardner Road just west of the study intersection for the eastbound and westbound travel directions in March 2023. Speed data is provided in the **Appendix**. The unposted statutory speed limit is 25 mph. **Table 1** presents a summary of the travel speed data collect in the study vicinity.

Table 1: Travel Speeds on Gardner Road

Travel Direction	Speed Limit	Travel Speed	
		Average	85th Percentile
Eastbound	25 mph	21 mph	26 mph
Westbound	25 mph	22 mph	26 mph

As summarized in **Table 1**, the observed average speed on Gardner Road in the site vicinity traveling eastbound was 21 mph and the 85th percentile travel speed is 26 mph. The average speed on Gardner westbound was 22 mph and the 85th percentile speed is 26 mph. The Brookline Department of Public Works Crosswalk Policy and Design Guidelines require the 85th percentile speed to be 40 mph or less for the installation of a marked crosswalk on an uncontrolled approach to an intersection.

Traffic Volumes

Peak Hour Pedestrian Volumes:

Manual turning movement counts (TMC) were conducted at the study intersection in March 2023. Traffic data was collected during the weekday morning (7:00 AM to 9:00 PM), weekday midday (2:30 PM to 3:30 PM) and weekday evening (4:00 PM to 6:00 PM) peak periods. These hours represent the peak periods of pedestrian and vehicular volume. Pedestrian crossings during the peak hour are summarized in **Table 2** and vehicle movements are depicted in **Figure 2**. Detailed count data are provided in the **Appendix**.

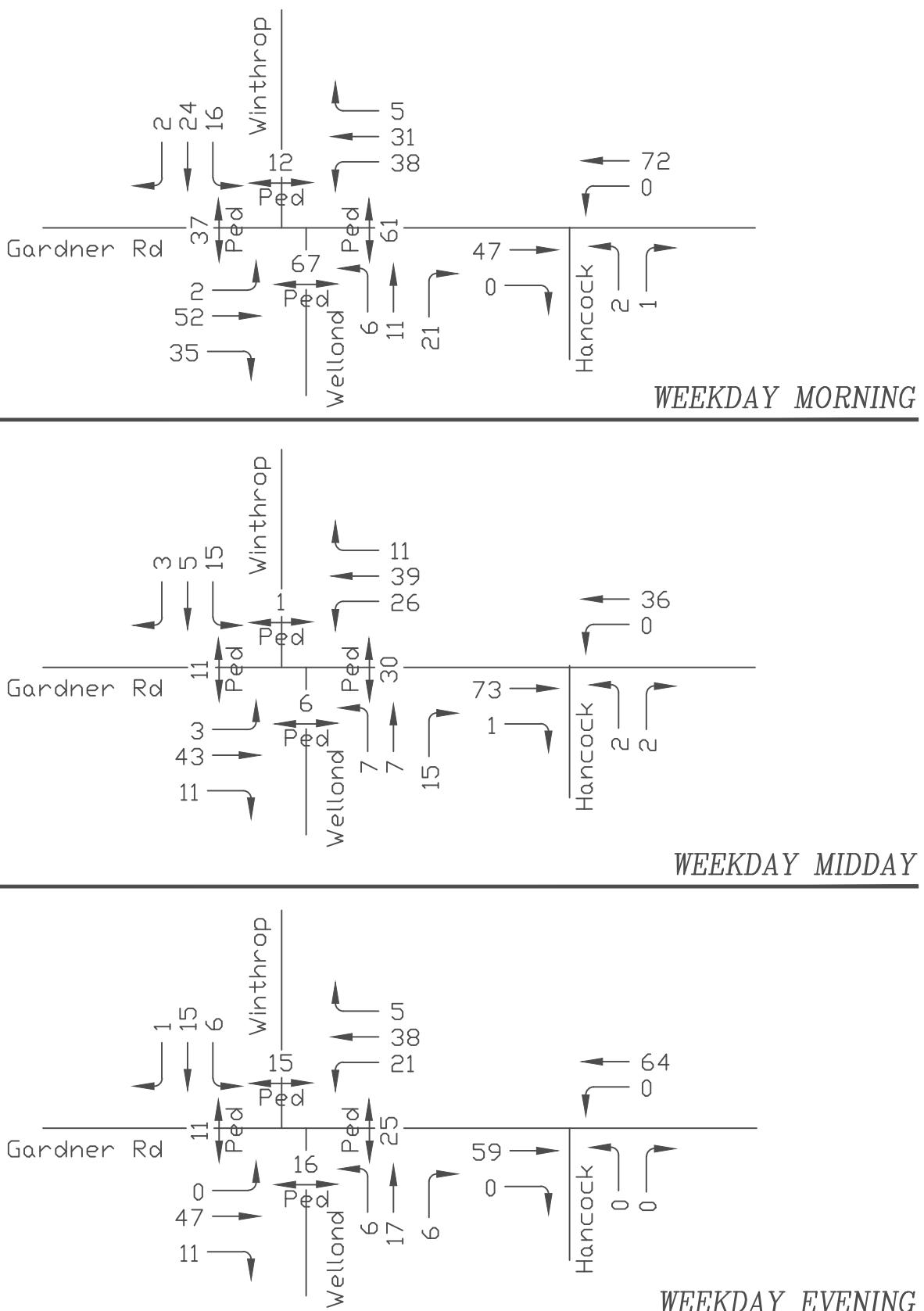
Table 2: Existing Pedestrian Crossings Per Peak Hour

	North-South Crossings
Weekday Morning	98
Weekday Midday	41
Weekday Evening	36

As summarized in **Table 2**, 98 pedestrians were observed crossing Gardner Road in the north-south direction in the morning peak hour, 41 pedestrians in the midday peak hour and 36 pedestrians were crossing during the evening peak hour.

A majority of the pedestrians crossing were school aged children or senior citizens. The Town of Brookline Crosswalk Policy and Design Guidelines recommend the installation of a crossing at an uncontrolled approach to an intersection if 20 or more pedestrians are observed during the morning and evening peak hour.

Overall traffic volumes do not meet MUTCD guidelines for all way stop control. The MUTCD traffic volume warrants the installation of an all-way stop if the follow criteria are all met: vehicle volumes on the intersecting streets are approximately equal; the minimum major streets combined vehicle volumes average 300 vehicles per hour for 8 hours in a day; and the minor streets combined vehicle, pedestrian, and bicycles volumes average 200 units per hour.



BROOKLINE ENGINEERING/TRANSPORTATION DIVISION
333 WASHINGTON ST 4TH FLOOR, BROOKLINE, MA
TELEPHONE : (617) 730-2319 FAX: (617) 264-6450

Figure 2

Peak Hour Traffic Volumes

Daily Traffic

An automated traffic recorder (ATR) count was conducted for Gardner Road just west of study intersection in March 2023. The results of the counts are summarized in **Table 3** and shown below.

Table 3: Existing Roadway Traffic-Volume Summary

	Weekday	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	Daily Volume (vpd) ¹	Volume (vph) ²	Percent Daily Traffic	Peak Flow Direction	Volume (vph) ²	Percent Daily Traffic	Peak Flow Direction
Gardner Road	1,169	149	12%	74%WB ³	115	9%	59%WB ³

¹Two-way daily traffic expressed in vehicles per day.

²Two-way peak hour volume expressed in vehicles per hour.

³WB = westbound

As summarized in **Table 3**, daily weekday traffic volumes on Gardner Road are approximately 1,169 vehicles per day (vpd). Peak hour traffic on Gardner Road is approximately 12 percent in the morning and 9 percent in the evening peak hour of daily traffic volumes with directional flow predominantly westbound. The Town of Brookline Crosswalk Policy and Design Guidelines recommend a vehicular volume greater than 3,000 vehicles per day if a crosswalk is to be installed at an uncontrolled approach to an intersection.

Sight Distance

Crosswalk Sight Distance

The American Association of State and Transportation Officials (AASHTO) standards reference stopping sight distance as the relevant sight distance requirement for a pedestrian crossing. Stopping sight distance (SSD) is the length of roadway ahead that is visible to the driver. The available SSD on a roadway should be sufficiently long enough to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path, although greater length of visible roadway is desirable.

Sight lines for the proposed crossings at the Gardner Road at Welland Road, Winthrop Road, and Hancock Road are compared to minimum SSD for the statutory speed limit, average travel speed and 85th percentile travel speed below in **Table 4** below. Sight line calculations are provided in the **Appendix**.

Table 4: Sight Distance

Approach / Travel Direction	Available Sight Distance	Statutory Speed 25 MPH	AASHTO Recommended ¹ Average Travel Speed ²	85 th Percentile Travel Speed ³
Stopping Sight Distance (SSD)				
<i>Proposed Crosswalk on Gardner Road Between Winthrop Road and Welland Rd</i>				
Eastbound	>300'	165'	115'	155'
Westbound	>160'	145'	130'	175'
<i>Proposed Crosswalk on Somerset Road at Gardner Road on the North side of the intersection</i>				
Southbound	>300'	155'		
<i>Proposed Crosswalk on Somerset Road at Gardner Road on the South side of the intersection</i>				
Northbound	>300'	155'		

¹Recommended sight distance based on AASHTO, A Policy on Geometric Design of Highways and Streets. Based on driver height of eye of 3.5 feet to object height of 2.0 feet and adjustments for roadway grade.

²Average Speed is 21 mph EB and 21 mph WB.

³85th percentile travel speed is 26 mph EB and 26 mph WB.

The approaches to the three proposed crosswalk locations exceed AASHTO's minimum recommended stopping sight distance. The existing stopping sight distance is adequate for the installation of the crosswalks.

Sight Distance

The American Association of State and Transportation Officials (AASHTO) standards reference two types of sight distances which are relevant for the study intersection: SSD and intersection sight distance (ISD). SSD pertains to roadway segments (i.e., Gardner Road) and is the distance needed for a vehicle traveling on the roadway to safely stop to avoid a collision with an object. ISD relates specifically to intersections and is the distance necessary for a vehicle leaving the side street to see oncoming traffic and not cause the traffic on the major street to slow down unduly. Sight lines for critical vehicle movements at the intersection were compared to minimum safe SSD and ISD guidelines for the statutory speed limit. The evaluation is based on field measurements of available sight lines conducted in March 2023. Sight line calculations are provided in the **Appendix** and are summarized below in **Table 5**.

Table 5 Sight Distance

Approach /Travel Direction	Available Sight Distance	Statutory Speed 25 MPH	AASHTO Recommended ¹	85 th Percentile Travel Speed ²	Travel Speed ³
Stopping Sight Distance					
Winthrop Road Southbound					
From the Right	>300'	165'	130'	175'	
From the Left	180'	145'	115'	155'	
Welland Road Northbound					
From the Right	170'	145'	115'	155'	
From the Left	>300'	165'	130'	175'	
Hancock Road Northbound					
From the Right	>300'	145'	115'	155'	
From the Left	>180'	165'	130'	175'	
Intersection Sight Distance – Stop Control					
Winthrop Road Southbound					
Looking Right	>300'	280'	235'	290'	
Looking Left	155'	280'	230'	290'	
Welland Road Northbound					
Looking Right	220'	280'	235'	290'	
Looking Left	>300'	280'	235'	290'	
Hancock Road Northbound					
Looking Right	200'	280'	235'	290'	
Looking Left	>300'	280'	235'	290'	

¹Recommended sight distance based on A Policy on Geometric Design of Highways and Streets, AASHTO, 4th edition 2001. Based on driver height of eye of 3.5 feet to object height of 2.0 feet for SSD or 3.5 feet for ISD and adjustments for roadway grade.

²Average Speed is 21 mph EB and 21 mph WB.

³85th percentile travel speed is 26 mph EB and 26 mph WB.

2.

The existing SSD is adequate for all approaches. However, the ISD is deficient looking west for the Winthrop Road Southbound approach and Welland Road Northbound approach. The view is obstructed by a bend in the road and landscaping. Although ISD is restricted, this is common in an urban environment and crash history can be a better indicator of a problem area. In the last three years only one crash was reported and it involved a vehicle backing up.

The Hancock Road Northbound approach has ISD that is deficient to operate under no control or yield control. It is recommended that a stop sign be installed for the approach to create sight triangles that better accommodate AASHTO ISD guidelines.

Intersection sight distances photos can be found in the **appendix**.

Crash Analysis

In order to identify accident trends and safety characteristics for the study area accident reports were obtained from MassDOT Crash Database and Brookline Police Department for the latest available three year period. No crash data was reported in the study period by MassDOT. The Brookline Police Department reported one crash involving a vehicle being struck while backing up. The MUTCD recommends all way stop control based on crash history only if five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation are reported.

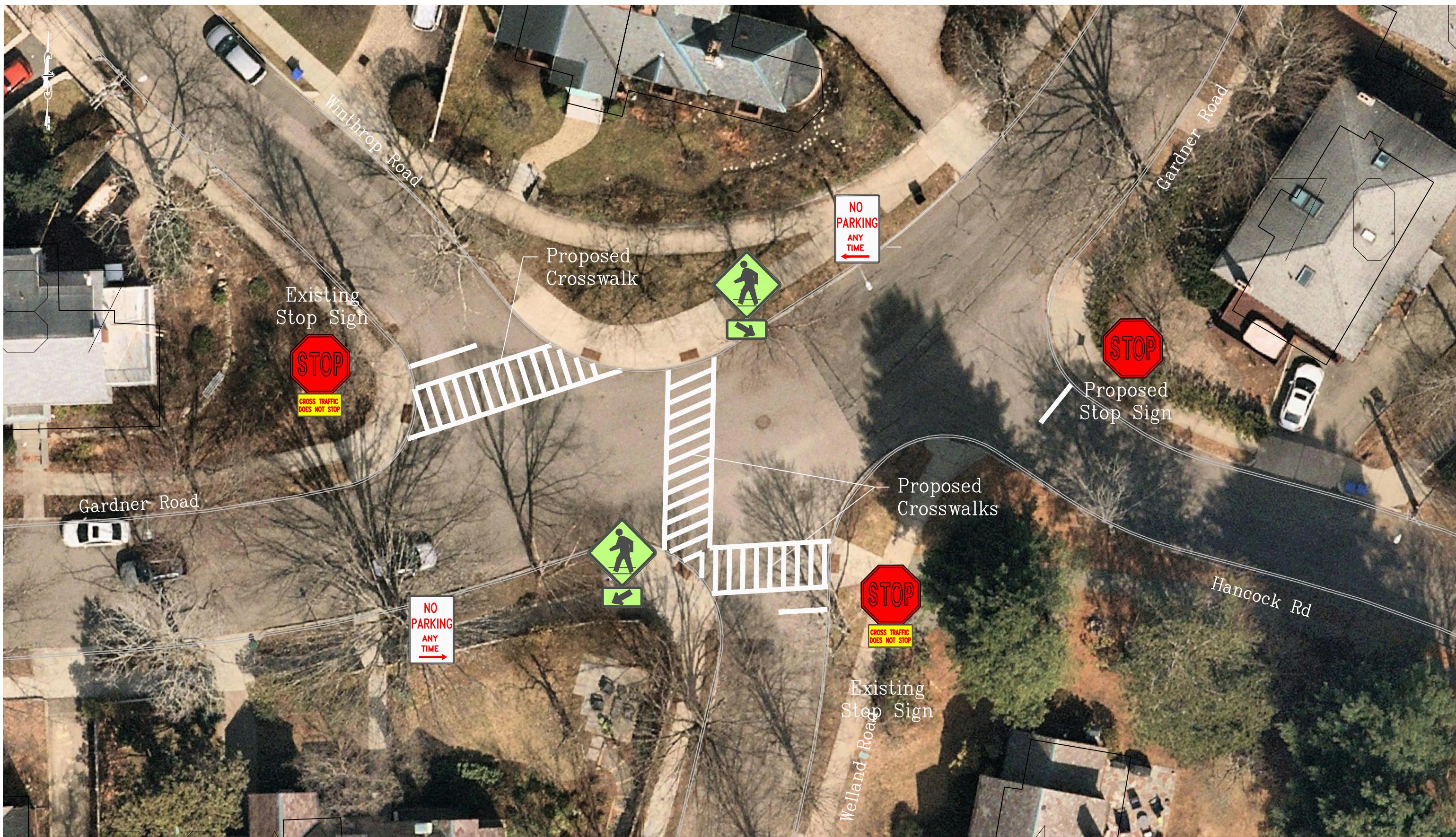
Conclusion

The installation of crosswalks is recommended on Gardner Road between Welland Road and Winthrop Road and across the Winthrop Road and Welland Road legs of the intersection. The crosswalks across Gardner Road meets five of the six Brookline Department of Public Works Crosswalk Policy and Design Guidelines. The vehicle volume was below the Crosswalk Policy and Design Guidelines requirement to install a crosswalk, however installing crosswalks will help highlight to drivers that pedestrians are crossing at the intersection. It was observed that a significant number of pedestrians at the intersection are school aged children and the intersection is in close proximity to the Brookline High School and Pierce Elementary School.

All-way stop control is not recommended for the Gardner Road at Welland Road, Winthrop Road, and Hancock Road intersection. The intersection does not meet MUTCD guidelines for all way stop control. However the Hancock Road approach should be placed under Stop control. The Welland Road and Gardner Road stop signs should be supplemented with a “Cross Traffic Does Not Stop” sign.

No Parking within the intersection should be posted to improve visibility of the crosswalks and drivers navigating the intersection. The Brookline Traffic Rules and Regulations already restrict parking within an intersection and posting the signs would formalize the resection.

The proposed intersection improvements are depicted in **Figure 3**.



Appendix

- Resident Request
- Traffic Count Data
- Sight Line Calculations
- Sight Line Photos
- Crash Data

Daniel Martin

From: Todd Kirrane
Sent: Monday, July 22, 2019 4:39 PM
To: Daniel Martin
Subject: FW: Crosswalks/stop signs at Winthrop and Gardner intersection

Todd Kirrane
Transportation Administrator
Town of Brookline, MA
www.brooklinema.gov/transportation
www.twitter.com/BlineTransport
www.facebook.com/BrooklineDPW

-----Original Message-----

From: Ned Sebelius [mailto:nsebelius@gmail.com]
Sent: Friday, December 07, 2018 11:28 AM
To: Todd Kirrane
Cc: Lisa Rockefeller
Subject: Crosswalks/stop signs at Winthrop and Gardner intersection

Hi Todd,

I'm here in the office at townhall and they have told me to email you about our interest in getting stop signs and cross walks put in at the intersection of Gardner Road and Winthrop. We live at 87 Gardner Road and have a number of children on our block who have to cross that intersection to walk to Pierce. The five-way intersection there has only two stops signs and we get a lot of speeding traffic with no safe place to cross.

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th	
		Total												Total		
12:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	19
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	19
2:00	1	2	0	0	0	0	0	0	0	0	0	0	0	3	15	20
3:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2	13	14
4:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	15	20
5:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	17	20
6:00	1	1	2	1	0	0	0	0	0	0	0	0	0	5	22	27
7:00	9	6	13	7	0	0	0	0	0	0	0	0	0	35	20	26
8:00	2	11	18	1	0	0	0	0	0	0	0	0	0	32	21	24
9:00	2	5	7	5	0	0	0	0	0	0	0	0	0	19	22	27
10:00	2	9	11	1	0	0	0	0	0	0	0	0	0	23	21	25
11:00	0	2	5	0	0	0	0	0	0	0	0	0	0	7	22	25
12:00 PM	1	2	16	3	0	0	0	0	0	0	0	0	0	22	23	27
1:00	1	5	9	3	0	0	0	0	0	0	0	0	0	18	22	24
2:00	2	7	13	5	3	0	0	0	0	0	0	0	0	30	23	28
3:00	0	9	10	2	1	0	0	0	0	0	0	0	0	22	22	26
4:00	1	12	17	4	0	0	0	0	0	0	0	0	0	34	22	25
5:00	2	14	24	5	1	0	0	0	0	0	0	0	0	46	22	25
6:00	1	12	14	2	0	0	0	0	0	0	0	0	0	29	21	24
7:00	1	6	11	0	0	0	0	0	0	0	0	0	0	18	22	25
8:00	2	1	6	1	0	0	0	0	0	0	0	0	0	10	21	26
9:00	0	1	6	1	0	0	0	0	0	0	0	0	0	8	23	26
10:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2	23	24
11:00	1	1	1	2	0	0	0	0	0	0	0	0	0	5	21	26
Total	34	107	185	43	5	0	0	0	0	0	0	0	0	374		
Percentile Speed		15th	50th	85th	95th											
Mean Speed (Average)		20.5														
10 MPH Pace Speed		15-24														
Number in Pace		289														
Percent in Pace		77.3%														
Number > 25 MPH		48														
Percent > 25 MPH		12.8%														

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - MPH													Mean	85th	
		> 20 - MPH	> 25 - MPH	> 30 - MPH	> 35 - MPH	> 40 - MPH	> 45 - MPH	> 50 - MPH	> 55 - MPH	> 60 - MPH	> 65 - MPH	> 70 MPH	Total				
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16	17	
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	
6:00	0	2	3	3	0	0	0	0	0	0	0	0	0	8	24	26	
7:00	2	7	12	7	0	0	0	0	0	0	0	0	0	28	22	26	
8:00	1	11	20	7	1	0	0	0	0	0	0	0	0	40	22	26	
9:00	2	5	18	8	0	0	0	0	0	0	0	0	0	33	23	27	
10:00	1	3	7	4	0	0	0	0	0	0	0	0	0	0	15	21	25
11:00	2	10	14	7	0	0	0	0	0	0	0	0	0	33	21	26	
12:00 PM	0	4	15	3	0	0	0	0	0	0	0	0	0	22	22	25	
1:00	1	4	15	0	0	0	0	0	0	0	0	0	0	20	22	25	
2:00	0	8	21	13	0	0	0	0	0	0	0	0	0	42	22	27	
3:00	1	5	27	7	1	0	0	0	0	0	0	0	0	41	23	26	
4:00	1	3	27	15	0	0	0	0	0	0	0	0	0	46	23	26	
5:00	3	8	32	1	0	0	0	0	0	0	0	0	0	44	22	25	
6:00	5	12	15	4	2	0	0	0	0	0	0	0	0	38	21	25	
7:00	0	9	17	5	1	0	0	0	0	0	0	0	0	32	23	27	
8:00	0	4	6	1	0	0	0	0	0	0	0	0	0	11	21	26	
9:00	0	4	5	0	0	0	0	0	0	0	0	0	0	9	22	26	
10:00	4	0	5	1	0	0	0	0	0	0	0	0	0	10	20	24	
11:00	0	2	3	2	0	0	0	0	0	0	0	0	0	7	22	28	
Total	23	103	262	88	5	0	0	0	0	0	0	0	0	481			

Percentile Speed	15th	50th	85th	95th	
Mean Speed (Average)	21.8	19	23	26	28
10 MPH Pace Speed	16-25				
Number in Pace	362				
Percent in Pace	75.3%				
Number > 25 MPH	93				
Percent > 25 MPH	19.3%				

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th	
		Total												Total		
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2	22	26
1:00	1	0	0	1	0	0	0	0	0	0	0	0	0	2	21	26
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
5:00	0	0	2	2	0	0	0	0	0	0	0	0	0	4	23	29
6:00	1	0	2	2	1	0	0	0	0	0	0	0	0	6	24	27
7:00	1	1	13	7	0	0	0	0	0	0	0	0	0	22	22	26
8:00	0	4	28	6	0	0	0	0	0	0	0	0	0	38	21	25
9:00	1	8	9	8	0	0	0	0	0	0	0	0	0	26	23	28
10:00	0	8	6	6	0	0	0	0	0	0	0	0	0	20	22	25
11:00	2	12	6	4	0	0	0	0	0	0	0	0	0	24	21	26
12:00 PM	1	8	10	0	0	0	0	0	0	0	0	0	0	19	22	25
1:00	1	7	14	7	0	0	0	0	0	0	0	0	0	29	23	26
2:00	0	8	13	12	2	0	0	0	0	0	0	0	0	35	22	27
3:00	5	13	20	6	0	0	0	0	0	0	0	0	0	44	21	25
4:00	1	15	17	5	0	0	0	0	0	0	0	0	0	38	21	25
5:00	3	13	23	6	0	0	0	0	0	0	0	0	0	45	22	25
6:00	0	17	20	6	0	0	0	0	0	0	0	0	0	43	22	25
7:00	0	9	14	2	0	0	0	0	0	0	0	0	0	25	21	24
8:00	1	5	10	4	2	0	0	0	0	0	0	0	0	22	22	25
9:00	0	7	4	3	0	0	0	0	0	0	0	0	0	14	21	27
10:00	0	2	4	1	0	0	0	0	0	0	0	0	0	7	22	28
11:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3	24	27
Total	18	139	217	89	5	0	0	0	0	0	0	0	0	468		

Percentile Speed	15th	50th	85th	95th	
Mean Speed (Average)	21.5	18	22	26	29
10 MPH Pace Speed	15-24				
Number in Pace	352				
Percent in Pace	75.2%				
Number > 25 MPH	94				
Percent > 25 MPH	20.1%				

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th	
		Total												Total		
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	3	24	26
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	19	20
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
5:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	24	24
6:00	0	1	3	2	0	0	0	0	0	0	0	0	0	6	24	26
7:00	0	4	10	8	0	0	0	0	0	0	0	0	0	22	23	27
8:00	2	10	22	8	0	0	0	0	0	0	0	0	0	42	22	25
9:00	0	7	13	8	1	0	0	0	0	0	0	0	0	29	23	27
10:00	0	6	18	4	1	0	0	0	0	0	0	0	0	29	22	26
11:00	1	8	14	4	0	0	0	0	0	0	0	0	0	27	21	26
12:00 PM	0	11	21	4	1	1	0	0	0	0	0	0	0	38	22	26
1:00	2	7	29	7	2	0	0	0	0	0	0	0	0	47	23	27
2:00	3	11	21	10	1	1	0	0	0	0	0	0	0	47	23	26
3:00	2	11	28	8	1	0	0	0	0	0	0	0	0	50	22	25
4:00	0	10	24	6	0	0	0	0	0	0	0	0	0	40	22	26
5:00	2	15	23	4	2	0	0	0	0	0	0	0	0	46	22	25
6:00	1	11	16	4	1	0	0	0	0	0	0	0	0	33	22	25
7:00	2	8	16	1	0	0	0	0	0	0	0	0	0	27	21	25
8:00	0	5	8	2	0	0	0	0	0	0	0	0	0	15	22	25
9:00	0	1	12	4	0	0	0	0	0	0	0	0	0	17	23	27
10:00	1	2	6	3	0	0	0	0	0	0	0	0	0	12	22	26
11:00	1	2	2	0	0	0	0	0	0	0	0	0	0	5	21	24
Total	17	131	289	88	10	2	0	0	0	0	0	0	0	537		

Percentile Speed	15th	50th	85th	95th	
Mean Speed (Average)	21.9	19	23	26	28
10 MPH Pace Speed	15-24				
Number in Pace	414				
Percent in Pace	77.1%				
Number > 25 MPH	100				
Percent > 25 MPH	18.6%				

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	3/4/2023	Mean													85th			
		0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH				
12:00 AM		0	3	1	0	0	0	0	0	0	0	0	0	0	4	20	25	
1:00		0	0	1	0	0	0	0	0	0	0	0	0	0	1	19	25	
2:00		2	1	0	0	0	0	0	0	0	0	0	0	0	3	15	19	
3:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1	15	20	
4:00		0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	18	
5:00		1	0	0	0	0	0	0	0	0	0	0	0	0	1	19	24	
6:00		0	3	0	1	0	0	0	0	0	0	0	0	0	4	20	25	
7:00		1	1	2	1	0	0	0	0	0	0	0	0	0	5	22	27	
8:00		2	1	4	0	0	0	0	0	0	0	0	0	0	7	21	26	
9:00		1	6	8	2	1	0	0	0	0	0	0	0	0	0	18	21	24
10:00		1	9	13	3	0	0	0	0	0	0	0	0	0	0	26	21	24
11:00		2	10	7	3	0	0	0	0	0	0	0	0	0	0	22	20	24
12:00 PM		0	8	13	11	0	0	0	0	0	0	0	0	0	32	23	27	
1:00		1	11	12	1	1	0	0	0	0	0	0	0	0	0	26	20	23
2:00		1	3	13	6	0	0	0	0	0	0	0	0	0	0	23	22	26
3:00		0	6	9	1	0	0	0	0	0	0	0	0	0	0	16	22	26
4:00		0	5	16	5	0	0	0	0	0	0	0	0	0	0	26	23	25
5:00		0	4	9	4	0	0	0	0	0	0	0	0	0	0	17	22	26
6:00		4	9	7	4	0	0	0	0	0	0	0	0	0	0	24	20	25
7:00		1	6	7	1	0	0	0	0	0	0	0	0	0	0	15	21	25
8:00		0	1	11	6	0	0	0	0	0	0	0	0	0	0	18	22	26
9:00		1	3	2	5	0	0	0	0	0	0	0	0	0	0	11	22	27
10:00		2	2	6	1	1	0	0	0	0	0	0	0	0	0	12	21	26
11:00		0	5	2	0	1	0	0	0	0	0	0	0	0	0	8	22	24
Total		20	98	143	55	4	0	0	0	0	0	0	0	0	0	320		

Percentile Speed	15th	50th	85th	95th	
Mean Speed (Average)	21.1	17	22	26	28
10 MPH Pace Speed	15-24				
Number in Pace	238				
Percent in Pace	74.4%				
Number > 25 MPH	59				
Percent > 25 MPH	18.4%				

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th
		Total												Total	
12:00 AM	0	1	2	3	0	0	0	0	0	0	0	0	0	6	24
1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
3:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	20
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
6:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	22
7:00	0	1	3	0	0	0	0	0	0	0	0	0	0	4	23
8:00	0	2	6	1	1	0	0	0	0	0	0	0	0	10	23
9:00	0	3	6	5	0	0	0	0	0	0	0	0	0	14	23
10:00	3	7	10	3	1	0	0	0	0	0	0	0	0	24	22
11:00	0	7	9	5	0	0	0	0	0	0	0	0	0	21	23
12:00 PM	0	3	20	5	1	0	0	0	0	0	0	0	0	29	23
1:00	1	6	16	10	0	0	0	0	0	0	0	0	0	33	23
2:00	1	4	18	10	0	0	0	0	0	0	0	0	0	33	23
3:00	2	5	11	3	0	0	0	0	0	0	0	0	0	21	22
4:00	0	9	14	4	0	0	0	0	0	0	0	0	0	27	22
5:00	0	8	18	5	0	0	0	0	0	0	0	0	0	31	22
6:00	2	5	11	8	1	0	0	0	0	0	0	0	0	27	22
7:00	1	2	8	4	0	0	0	0	0	0	0	0	0	15	22
8:00	0	2	11	1	2	0	0	0	0	0	0	0	0	16	22
9:00	0	4	5	1	0	0	0	0	0	0	0	0	0	10	22
10:00	1	0	5	0	0	0	0	0	0	0	0	0	0	6	20
11:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	25
Total	11	70	176	68	6	0	0	0	0	0	0	0	0	331	

Percentile Speed	15th	50th	85th	95th	
Mean Speed (Average)	22.2	19	23	26	29
10 MPH Pace Speed	16-25				
Number in Pace	246				
Percent in Pace	74.3%				
Number > 25 MPH	74				
Percent > 25 MPH	22.4%				

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th	
		Total												Total		
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	3	24	27
1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21	21
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	25
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	21
6:00	0	1	3	3	0	0	0	0	0	0	0	0	0	7	25	28
7:00	0	2	4	5	0	0	0	0	0	0	0	0	0	11	23	28
8:00	2	10	25	11	3	0	0	0	0	0	0	0	0	51	22	26
9:00	1	5	17	5	0	0	0	0	0	0	0	0	0	28	23	26
10:00	1	5	9	6	0	0	0	0	0	0	0	0	0	21	23	26
11:00	2	10	16	2	0	0	0	0	0	0	0	0	0	30	22	27
12:00 PM	0	9	8	2	1	0	0	0	0	0	0	0	0	20	21	24
1:00	2	8	15	6	0	0	0	0	0	0	0	0	0	31	22	26
2:00	1	14	15	9	1	0	0	0	0	0	0	0	0	40	21	26
3:00	1	12	10	10	2	0	0	0	0	0	0	0	0	35	22	27
4:00	0	11	16	6	1	0	0	0	0	0	0	0	0	34	22	26
5:00	1	6	21	10	0	0	0	0	0	0	0	0	0	38	23	26
6:00	0	5	22	4	0	0	0	0	0	0	0	0	0	31	22	26
7:00	2	3	22	3	1	0	0	0	0	0	0	0	0	31	22	27
8:00	1	8	9	3	2	0	0	0	0	0	0	0	0	23	22	26
9:00	1	2	4	1	0	0	0	0	0	0	0	0	0	8	21	26
10:00	0	1	1	2	0	0	0	0	0	0	0	0	0	4	24	29
11:00	0	2	3	0	0	0	0	0	0	0	0	0	0	5	23	26
Total	15	114	223	89	11	0	0	0	0	0	0	0	0	452		
		Percentile Speed	15th	50th	85th	95th										
		Mean Speed (Average)	22.0													
		10 MPH Pace Speed	15-24													
		Number in Pace	333													
		Percent in Pace	73.7%													
		Number > 25 MPH	100													
		Percent > 25 MPH	22.1%													
Grand Total	138	762	1495	520	46	2	0	0	0	0	0	0	0	0	2963	
Stats			Percentile Speed	15th	50th	85th	95th									
Stats			Mean Speed (Average)	21.7												
Stats			10 MPH Pace Speed	15-24												
Stats			Number in Pace	2488												
Stats			Percent in Pace	75.0%												
Stats			Number > 25 MPH	643												
Stats			Percent > 25 MPH	19.4%												

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th	
		Total												Total		
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	19
1:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	19
2:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	20
3:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2	13	14
4:00	2	1	0	0	0	0	0	0	0	0	0	0	0	3	15	20
5:00	3	3	1	0	0	0	0	0	0	0	0	0	0	7	17	20
6:00	1	4	3	4	0	0	0	0	0	0	0	0	0	12	22	27
7:00	9	9	15	3	1	0	0	0	0	0	0	0	0	37	20	26
8:00	6	22	30	9	0	0	0	0	0	0	0	0	0	67	21	24
9:00	1	12	10	5	1	1	0	0	0	0	0	0	0	30	22	27
10:00	5	10	12	7	0	0	0	0	0	0	0	0	0	34	21	25
11:00	0	8	14	1	0	0	0	0	0	0	0	0	0	23	22	25
12:00 PM	2	5	6	9	0	0	0	0	0	0	0	0	0	22	23	27
1:00	2	6	20	2	0	0	0	0	0	0	0	0	0	30	22	24
2:00	2	11	12	8	1	0	0	0	0	0	0	0	0	34	23	28
3:00	0	18	23	9	0	0	0	0	0	0	0	0	0	50	22	26
4:00	0	13	15	4	0	0	0	0	0	0	0	0	0	32	22	25
5:00	1	17	27	9	0	0	0	0	0	0	0	0	0	54	22	25
6:00	3	15	22	4	1	0	0	0	0	0	0	0	0	45	21	24
7:00	0	6	8	4	1	0	0	0	0	0	0	0	0	19	22	25
8:00	1	5	6	3	0	0	0	0	0	0	0	0	0	15	21	26
9:00	0	3	6	3	0	0	0	0	0	0	0	0	0	12	23	26
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	24
11:00	1	1	2	1	0	0	0	0	0	0	0	0	0	5	21	26
Total	43	171	232	85	5	1	0	0	0	0	0	0	0	537		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	20.7			
10 MPH Pace Speed	15-24			
Number in Pace	399			
Percent in Pace	74.3%			
Number > 25 MPH	91			
Percent > 25 MPH	16.9%			

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - MPH													Mean	85th
		> 20 - MPH	> 25 - MPH	> 30 - MPH	> 35 - MPH	> 40 - MPH	> 45 - MPH	> 50 - MPH	> 55 - MPH	> 60 - MPH	> 65 - MPH	> 70 MPH	Total			
12:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	16	17
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3	21	23
5:00	0	2	4	0	0	0	0	0	0	0	0	0	0	6	21	24
6:00	0	1	3	2	0	0	0	0	0	0	0	0	0	6	24	26
7:00	4	10	24	8	0	0	0	0	0	0	0	0	0	46	22	26
8:00	9	28	27	12	1	0	0	0	0	0	0	0	0	77	22	26
9:00	0	4	20	12	0	0	0	0	0	0	0	0	0	36	23	27
10:00	5	7	15	1	0	0	0	0	0	0	0	0	0	28	21	25
11:00	4	11	18	4	1	0	0	0	0	0	0	0	0	38	21	26
12:00 PM	2	2	17	3	0	0	0	0	0	0	0	0	0	24	22	25
1:00	2	10	13	5	0	0	0	0	0	0	0	0	0	30	22	25
2:00	3	16	22	7	0	0	0	0	0	0	0	0	0	48	22	27
3:00	3	14	15	8	2	0	0	0	0	0	0	0	0	42	23	26
4:00	0	13	21	5	1	0	0	0	0	0	0	0	0	40	23	26
5:00	2	12	28	9	1	0	0	0	0	0	0	0	0	52	22	25
6:00	4	11	23	4	0	0	0	0	0	0	0	0	0	42	21	25
7:00	0	12	16	9	0	0	0	0	0	0	0	0	0	37	23	27
8:00	3	7	13	5	0	0	0	0	0	0	0	0	0	28	21	26
9:00	0	3	2	3	0	0	0	0	0	0	0	0	0	8	22	26
10:00	1	3	4	2	0	0	0	0	0	0	0	0	0	10	20	24
11:00	0	1	3	0	0	0	0	0	0	0	0	0	0	4	22	28
Total	43	169	289	99	6	0	0	0	0	0	0	0	0	606		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	21.0			
10 MPH Pace Speed	15-24			
Number in Pace	453			
Percent in Pace	74.8%			
Number > 25 MPH	105			
Percent > 25 MPH	17.3%			

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th
		Total													
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	3	22
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	17
5:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2	23
6:00	0	2	4	1	1	0	0	0	0	0	0	0	0	8	24
7:00	8	13	24	4	2	0	0	0	0	0	0	0	0	51	22
8:00	13	37	46	10	1	0	0	0	0	0	0	0	0	107	21
9:00	2	3	17	13	2	0	0	0	0	0	0	0	0	37	23
10:00	3	6	23	2	0	0	0	0	0	0	0	0	0	34	22
11:00	1	12	12	3	1	0	0	0	0	0	0	0	0	29	21
12:00 PM	1	9	22	5	0	0	0	0	0	0	0	0	0	37	22
1:00	1	9	14	6	0	0	0	0	0	0	0	0	0	30	23
2:00	6	13	20	4	0	0	0	0	0	0	0	0	0	43	22
3:00	7	19	23	7	1	0	0	0	0	0	0	0	0	57	21
4:00	5	23	26	7	0	0	0	0	0	0	0	0	0	61	21
5:00	2	22	36	5	1	0	0	0	0	0	0	0	0	66	22
6:00	1	15	21	6	1	0	0	0	0	0	0	0	0	44	22
7:00	3	13	17	4	0	0	0	0	0	0	0	0	0	37	21
8:00	0	6	21	1	0	0	0	0	0	0	0	0	0	28	22
9:00	0	7	4	3	0	0	0	0	0	0	0	0	0	14	21
10:00	1	1	3	1	0	0	0	0	0	0	0	0	0	6	22
11:00	0	1	2	2	1	0	0	0	0	0	0	0	0	6	24
Total	55	212	338	85	11	0	0	0	0	0	0	0	0	701	

	Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	20.6	18	22	25	28
10 MPH Pace Speed	15-24				
Number in Pace	544				
Percent in Pace	77.6%				
Number > 25 MPH	96				
Percent > 25 MPH	13.7%				

Town of Brookline
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH														Mean	85th
		> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total		
12:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2	24	26
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	19	20
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2	18	21
5:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2	24	24
6:00	0	1	2	0	1	0	0	0	0	0	0	0	0	4	24	26
7:00	3	11	18	10	0	0	0	0	0	0	0	0	0	42	23	27
8:00	5	19	36	7	0	0	0	0	0	0	0	0	0	67	22	25
9:00	3	6	19	11	0	0	0	0	0	0	0	0	0	39	23	27
10:00	4	11	14	6	1	0	0	0	0	0	0	0	0	36	22	26
11:00	5	12	12	7	0	0	0	0	0	0	0	0	0	36	21	26
12:00 PM	4	13	11	7	1	0	0	0	0	0	0	0	0	36	22	26
1:00	5	11	20	13	1	0	0	0	0	0	0	0	0	50	23	27
2:00	2	16	24	12	1	0	0	0	0	0	0	0	0	55	23	26
3:00	5	12	22	3	1	0	0	0	0	0	0	0	0	43	22	25
4:00	3	8	27	8	0	0	0	0	0	0	0	0	0	46	22	26
5:00	3	20	25	7	1	0	0	0	0	0	0	0	0	56	22	25
6:00	3	12	23	4	0	0	0	0	0	0	0	0	0	42	22	25
7:00	3	15	15	7	0	0	0	0	0	0	0	0	0	40	21	25
8:00	0	9	12	0	1	0	0	0	0	0	0	0	0	22	22	25
9:00	0	5	6	3	0	0	0	0	0	0	0	0	0	14	23	27
10:00	1	1	7	1	0	0	0	0	0	0	0	0	0	10	22	26
11:00	0	3	5	1	0	0	0	0	0	0	0	0	0	9	21	24
Total	50	186	303	107	8	0	0	0	0	0	0	0	0	654		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	20.9			
10 MPH Pace Speed	15-24			
Number in Pace	483			
Percent in Pace	73.9%			
Number > 25 MPH	115			
Percent > 25 MPH	17.6%			

Town of Brookline
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - 20 MPH												Mean	85th	
		> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total			
12:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	4	20	25	
1:00	2	0	1	0	0	0	0	0	0	0	0	0	3	19	25	
2:00	2	1	0	0	0	0	0	0	0	0	0	0	3	15	19	
3:00	2	1	0	0	0	0	0	0	0	0	0	0	3	15	20	
4:00	1	2	0	0	0	0	0	0	0	0	0	0	3	16	18	
5:00	0	0	1	0	0	0	0	0	0	0	0	0	1	19	24	
6:00	1	0	2	0	0	0	0	0	0	0	0	0	3	20	25	
7:00	0	1	4	2	0	0	0	0	0	0	0	0	7	22	27	
8:00	1	6	3	3	1	0	0	0	0	0	0	0	14	21	26	
9:00	2	6	13	1	0	0	0	0	0	0	0	0	22	21	24	
10:00	2	6	13	0	1	0	0	0	0	0	0	0	22	21	24	
11:00	3	8	7	2	0	0	0	0	0	0	0	0	0	20	20	24
12:00 PM	0	7	19	3	0	0	0	0	0	0	0	0	29	23	27	
1:00	5	7	10	1	0	0	0	0	0	0	0	0	23	20	23	
2:00	3	13	15	3	0	0	0	0	0	0	0	0	34	22	26	
3:00	1	5	8	5	1	0	0	0	0	0	0	0	20	22	26	
4:00	0	8	21	3	0	0	0	0	0	0	0	0	32	23	25	
5:00	0	10	12	2	1	0	0	0	0	0	0	0	25	22	26	
6:00	7	12	15	3	1	0	0	0	0	0	0	0	38	20	25	
7:00	0	14	13	2	0	0	0	0	0	0	0	0	29	21	25	
8:00	2	8	13	3	0	0	0	0	0	0	0	0	26	22	26	
9:00	1	6	9	3	0	0	0	0	0	0	0	0	19	22	27	
10:00	0	5	7	2	0	0	0	0	0	0	0	0	14	21	26	
11:00	0	1	4	1	0	0	0	0	0	0	0	0	6	22	24	
Total	35	129	192	39	5	0	0	0	0	0	0	0	0	400		

Percentile Speed	15th	50th	85th	95th
	17	21	25	27
Mean Speed (Average)	20.2			
10 MPH Pace Speed	15-24			
Number in Pace	317			
Percent in Pace	79.3%			
Number > 25 MPH	44			
Percent > 25 MPH	11.0%			

Town of Brookline
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - MPH													Mean	85th
		> 20 - MPH	> 25 - MPH	> 30 - MPH	> 35 - MPH	> 40 - MPH	> 45 - MPH	> 50 - MPH	> 55 - MPH	> 60 - MPH	> 65 - MPH	> 70 MPH	Total			
12:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	4	24	26
1:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	21	23
2:00	0	1	2	1	1	0	0	0	0	0	0	0	0	5	24	32
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	20	22
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	19	19
6:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3	22	27
7:00	0	1	3	0	1	0	0	0	0	0	0	0	0	5	23	25
8:00	1	1	6	4	0	0	0	0	0	0	0	0	0	12	23	27
9:00	2	5	11	5	0	0	0	0	0	0	0	0	0	23	23	26
10:00	0	5	10	5	0	0	0	0	0	0	0	0	0	20	22	26
11:00	1	5	13	6	0	0	0	0	0	0	0	0	0	25	23	27
12:00 PM	1	9	11	14	0	0	0	0	0	0	0	0	0	35	23	27
1:00	1	5	24	5	0	0	0	0	0	0	0	0	0	35	23	26
2:00	0	12	22	8	0	0	0	0	0	0	0	0	0	42	23	26
3:00	2	14	18	7	0	0	0	0	0	0	0	0	0	41	22	26
4:00	1	9	16	5	0	0	0	0	0	0	0	0	0	31	22	26
5:00	1	11	14	7	0	0	0	0	0	0	0	0	0	33	22	26
6:00	0	10	12	4	1	0	0	0	0	0	0	0	0	27	22	26
7:00	2	5	12	2	0	0	0	0	0	0	0	0	0	21	22	26
8:00	1	10	6	2	0	0	0	0	0	0	0	0	0	19	22	25
9:00	0	2	8	1	0	0	0	0	0	0	0	0	0	11	22	25
10:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4	20	22
11:00	0	0	1	1	0	0	0	0	0	0	0	0	0	3	25	33
Total	13	113	196	78	4	0	0	0	0	0	0	0	0	404		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	21.7			
10 MPH Pace Speed	15-24			
Number in Pace	305			
Percent in Pace	75.5%			
Number > 25 MPH	82			
Percent > 25 MPH	20.3%			

Town of Brookline
 Engineering/Transportation Division
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - MPH													Mean	85th
		> 20 - MPH	> 25 - MPH	> 30 - MPH	> 35 - MPH	> 40 - MPH	> 45 - MPH	> 50 - MPH	> 55 - MPH	> 60 - MPH	> 65 - MPH	> 70 MPH	Total			
12:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	24	27
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21
2:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2	24	25
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	1	2	1	0	0	0	0	0	0	0	0	0	0	4	18	21
6:00	0	0	3	2	0	0	0	0	0	0	0	0	0	5	25	28
7:00	1	7	17	9	0	0	0	0	0	0	0	0	0	34	23	28
8:00	2	26	40	9	0	0	0	0	0	0	0	0	0	77	22	26
9:00	0	7	20	4	0	0	0	0	0	0	0	0	0	31	23	26
10:00	2	3	18	2	0	0	0	0	0	0	0	0	0	25	23	26
11:00	3	7	10	9	0	0	0	0	0	0	0	0	0	29	22	27
12:00 PM	2	18	15	3	0	0	0	0	0	0	0	0	0	38	21	24
1:00	1	9	18	6	0	0	0	0	0	0	0	0	0	34	22	26
2:00	7	16	15	3	0	0	0	0	0	0	0	0	0	41	21	26
3:00	2	20	28	11	1	0	0	0	0	0	0	0	0	62	22	27
4:00	5	12	15	6	0	0	0	0	0	0	0	0	0	38	22	26
5:00	0	10	25	6	1	0	0	0	0	0	0	0	0	42	23	26
6:00	3	17	18	7	2	0	0	0	0	0	0	0	0	47	22	26
7:00	3	6	13	7	1	0	0	0	0	0	0	0	0	30	22	27
8:00	1	9	12	2	1	0	0	0	0	0	0	0	0	25	22	26
9:00	1	2	1	1	0	0	0	0	0	0	0	0	0	5	21	26
10:00	0	1	5	0	1	0	0	0	0	0	0	0	0	7	24	29
11:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2	23	26
Total	34	172	277	90	7	0	0	0	0	0	0	0	0	580		
		Percentile Speed	15th	50th	85th	95th										
		Mean Speed (Average)	21.1													
		10 MPH Pace Speed	15-24													
		Number in Pace	444													
		Percent in Pace	76.6%													
		Number > 25 MPH	97													
		Percent > 25 MPH	16.7%													
Grand Total	273	1152	1827	583	46	1	0	0	0	0	0	0	0	3882		
Stats		Percentile Speed	15th	50th	85th	95th										
		Mean Speed (Average)	20.9													
		10 MPH Pace Speed	15-24													
		Number in Pace	3350													
		Percent in Pace	76.3%													
		Number > 25 MPH	700													
		Percent > 25 MPH	15.9%													

Town of Brookline
 Engineering/Transportation Division
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	0	0	0
12:15	0	0	0
12:30	0	0	0
12:45	2	0	2
1:00	0	1	1
1:15	0	0	0
1:30	0	1	1
1:45	0	0	0
2:00	0	0	0
2:15	0	1	1
2:30	2	0	2
2:45	1	1	2
3:00	0	2	2
3:15	2	0	2
3:30	0	0	0
3:45	0	0	0
4:00	1	1	2
4:15	0	0	0
4:30	0	0	0
4:45	0	2	2
5:00	0	0	0
5:15	0	2	2
5:30	1	3	4
5:45	0	2	2
6:00	1	0	1
6:15	2	2	4
6:30	0	7	7
6:45	2	3	5
7:00	5	7	12
7:15	11	15	26
7:30	7	6	13
7:45	12	9	21
8:00	17	22	39
8:15	8	32	40
8:30	3	6	9
8:45	4	7	11
9:00	5	5	10
9:15	5	10	15
9:30	3	5	8
9:45	6	10	16
10:00	5	5	10
10:15	7	7	14
10:30	8	13	21
10:45	3	9	12
11:00	1	6	7
11:15	2	7	9
11:30	1	7	8
11:45	3	3	6
Total	130	219	349
Peak	7:15	7:30	7:30
Volume	47	69	113
Peak Factor	0.691	0.539	0.706

Town of Brookline
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	6	3	9
12:15	3	6	9
12:30	5	7	12
12:45	8	6	14
1:00	2	10	12
1:15	7	6	13
1:30	4	8	12
1:45	5	6	11
2:00	7	8	15
2:15	6	9	15
2:30	7	6	13
2:45	10	11	21
3:00	8	14	22
3:15	7	11	18
3:30	4	13	17
3:45	3	12	15
4:00	8	8	16
4:15	6	12	18
4:30	8	7	15
4:45	12	5	17
5:00	11	13	24
5:15	15	17	32
5:30	8	12	20
5:45	12	12	24
6:00	9	8	17
6:15	5	17	22
6:30	10	10	20
6:45	5	10	15
7:00	5	8	13
7:15	2	4	6
7:30	5	7	12
7:45	6	0	6
8:00	4	5	9
8:15	2	4	6
8:30	2	1	3
8:45	2	5	7
9:00	2	6	8
9:15	2	5	7
9:30	1	1	2
9:45	3	0	3
10:00	2	0	2
10:15	0	0	0
10:30	0	0	0
10:45	0	0	0
11:00	1	2	3
11:15	1	1	2
11:30	2	1	3
11:45	1	1	2
Total	244	318	562
Peak	4:30	5:00	5:00
Volume	46	54	100
Peak Factor	0.767	0.794	0.781

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	2	1	3
12:15	0	0	0
12:30	0	0	0
12:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	1	1
4:15	0	1	1
4:30	0	0	0
4:45	0	1	1
5:00	0	1	1
5:15	0	1	1
5:30	0	2	2
5:45	0	2	2
6:00	1	1	2
6:15	2	0	2
6:30	4	3	7
6:45	1	2	3
7:00	4	5	9
7:15	7	12	19
7:30	7	16	23
7:45	10	13	23
8:00	18	17	35
8:15	11	22	33
8:30	6	21	27
8:45	5	17	22
9:00	5	11	16
9:15	11	8	19
9:30	5	9	14
9:45	12	8	20
10:00	2	6	8
10:15	3	4	7
10:30	6	9	15
10:45	4	9	13
11:00	5	12	17
11:15	9	6	15
11:30	12	7	19
11:45	7	13	20
Total	159	241	400
Peak	7:30	8:00	7:45
Volume	46	77	118
Peak Factor	0.639	0.875	0.843

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	5	4	9
12:15	5	6	11
12:30	7	7	14
12:45	5	7	12
1:00	7	9	16
1:15	5	4	9
1:30	4	9	13
1:45	4	8	12
2:00	11	8	19
2:15	14	9	23
2:30	8	18	26
2:45	9	13	22
3:00	9	7	16
3:15	6	15	21
3:30	16	12	28
3:45	10	8	18
4:00	13	8	21
4:15	11	13	24
4:30	10	10	20
4:45	12	9	21
5:00	8	12	20
5:15	15	12	27
5:30	10	17	27
5:45	11	11	22
6:00	11	12	23
6:15	8	8	16
6:30	11	13	24
6:45	8	9	17
7:00	6	6	12
7:15	9	13	22
7:30	10	8	18
7:45	7	10	17
8:00	2	9	11
8:15	4	9	13
8:30	2	5	7
8:45	3	5	8
9:00	3	5	8
9:15	4	0	4
9:30	2	2	4
9:45	0	1	1
10:00	4	4	8
10:15	1	3	4
10:30	1	2	3
10:45	4	1	5
11:00	3	2	5
11:15	3	1	4
11:30	0	0	0
11:45	1	1	2
Total	322	365	687
Peak	3:30	2:30	5:15
Volume	50	53	99
Peak Factor	0.781	0.736	0.917

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	1	2	3
12:15	1	1	2
12:30	0	0	0
12:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	1	0	1
1:45	1	0	1
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	1	1
4:30	0	0	0
4:45	0	0	0
5:00	1	0	1
5:15	1	0	1
5:30	0	1	1
5:45	2	1	3
6:00	0	0	0
6:15	2	3	5
6:30	1	3	4
6:45	3	2	5
7:00	5	5	10
7:15	5	11	16
7:30	7	19	26
7:45	5	16	21
8:00	15	19	34
8:15	13	44	57
8:30	6	31	37
8:45	4	13	17
9:00	5	8	13
9:15	10	13	23
9:30	5	13	18
9:45	6	3	9
10:00	2	10	12
10:15	3	6	9
10:30	9	10	19
10:45	6	8	14
11:00	3	2	5
11:15	10	13	23
11:30	3	5	8
11:45	8	9	17
Total	144	272	416
Peak	7:30	7:45	7:45
Volume	40	110	149
Peak Factor	0.667	0.625	0.654

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

3/2/2023	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
Time			
12:00 PM	5	11	16
12:15	5	12	17
12:30	3	8	11
12:45	6	6	12
1:00	7	5	12
1:15	7	9	16
1:30	10	9	19
1:45	5	7	12
2:00	9	14	23
2:15	8	6	14
2:30	11	11	22
2:45	7	12	19
3:00	10	18	28
3:15	14	16	30
3:30	8	11	19
3:45	12	12	24
4:00	4	18	22
4:15	16	16	32
4:30	7	14	21
4:45	11	13	24
5:00	13	14	27
5:15	8	21	29
5:30	11	9	20
5:45	13	22	35
6:00	15	16	31
6:15	8	11	19
6:30	11	10	21
6:45	9	7	16
7:00	12	12	24
7:15	2	8	10
7:30	6	11	17
7:45	5	6	11
8:00	7	9	16
8:15	5	7	12
8:30	9	4	13
8:45	1	8	9
9:00	6	4	10
9:15	4	3	7
9:30	1	3	4
9:45	3	4	7
10:00	3	2	5
10:15	1	3	4
10:30	1	0	1
10:45	2	1	3
11:00	0	2	2
11:15	1	1	2
11:30	1	3	4
11:45	1	0	1
Total	324	429	753
Peak	4:15	5:15	5:15
Volume	47	68	115
Peak Factor	0.734	0.773	0.821

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	2	0	2
12:15	1	0	1
12:30	0	1	1
12:45	0	1	1
1:00	0	0	0
1:15	0	1	1
1:30	0	0	0
1:45	1	0	1
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	1	1
4:30	0	1	1
4:45	0	0	0
5:00	1	1	2
5:15	0	1	1
5:30	0	0	0
5:45	0	0	0
6:00	1	0	1
6:15	2	1	3
6:30	1	2	3
6:45	2	1	3
7:00	6	5	11
7:15	5	12	17
7:30	3	15	18
7:45	8	10	18
8:00	13	20	33
8:15	11	20	31
8:30	10	24	34
8:45	8	3	11
9:00	9	9	18
9:15	0	5	5
9:30	11	12	23
9:45	9	13	22
10:00	5	9	14
10:15	9	8	17
10:30	9	12	21
10:45	6	7	13
11:00	4	10	14
11:15	8	6	14
11:30	6	11	17
11:45	9	9	18
Total	160	231	391
Peak	7:45	7:45	7:45
Volume	42	74	116
Peak Factor	0.808	0.771	0.853

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	10	6	16
12:15	11	12	23
12:30	13	10	23
12:45	4	8	12
1:00	11	11	22
1:15	13	14	27
1:30	10	14	24
1:45	13	11	24
2:00	6	19	25
2:15	15	8	23
2:30	12	13	25
2:45	14	15	29
3:00	14	12	26
3:15	13	16	29
3:30	11	9	20
3:45	12	6	18
4:00	9	12	21
4:15	6	9	15
4:30	14	14	28
4:45	11	11	22
5:00	9	13	22
5:15	9	13	22
5:30	11	22	33
5:45	17	8	25
6:00	6	9	15
6:15	14	9	23
6:30	8	13	21
6:45	5	11	16
7:00	6	8	14
7:15	9	10	19
7:30	6	12	18
7:45	6	10	16
8:00	3	8	11
8:15	4	6	10
8:30	5	3	8
8:45	3	5	8
9:00	5	3	8
9:15	4	5	9
9:30	4	5	9
9:45	4	1	5
10:00	6	3	9
10:15	2	3	5
10:30	2	1	3
10:45	2	3	5
11:00	2	3	5
11:15	0	3	3
11:30	1	2	3
11:45	2	1	3
Total	377	423	800
Peak	2:15	4:45	2:30
Volume	55	59	109
Peak Factor	0.917	0.670	0.940

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	0	2	2
12:15	1	1	2
12:30	1	0	1
12:45	2	1	3
1:00	0	0	0
1:15	1	2	3
1:30	0	1	1
1:45	0	0	0
2:00	0	2	2
2:15	2	1	3
2:30	0	0	0
2:45	1	0	1
3:00	0	1	1
3:15	0	2	2
3:30	1	0	1
3:45	0	0	0
4:00	0	1	1
4:15	0	1	1
4:30	0	0	0
4:45	0	1	1
5:00	1	0	1
5:15	0	1	1
5:30	0	0	0
5:45	0	0	0
6:00	1	0	1
6:15	0	0	0
6:30	1	2	3
6:45	2	1	3
7:00	1	2	3
7:15	1	2	3
7:30	2	2	4
7:45	1	1	2
8:00	1	4	5
8:15	2	4	6
8:30	2	2	4
8:45	2	4	6
9:00	4	6	10
9:15	3	5	8
9:30	6	7	13
9:45	5	4	9
10:00	9	5	14
10:15	6	6	12
10:30	5	4	9
10:45	6	7	13
11:00	5	4	9
11:15	8	5	13
11:30	5	3	8
11:45	4	8	12
Total	92	105	197
Peak	9:30	8:45	9:30
Volume	26	22	48
Peak Factor	0.722	0.786	0.857

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

3/4/2023	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
Time			
12:00 PM	7	4	11
12:15	10	6	16
12:30	9	8	17
12:45	6	11	17
1:00	3	5	8
1:15	10	7	17
1:30	8	8	16
1:45	5	3	8
2:00	9	5	14
2:15	2	11	13
2:30	8	6	14
2:45	4	12	16
3:00	2	6	8
3:15	4	6	10
3:30	4	4	8
3:45	6	4	10
4:00	6	6	12
4:15	6	6	12
4:30	8	6	14
4:45	6	14	20
5:00	4	3	7
5:15	4	5	9
5:30	4	5	9
5:45	5	12	17
6:00	6	14	20
6:15	7	10	17
6:30	5	6	11
6:45	6	8	14
7:00	0	11	11
7:15	2	6	8
7:30	7	7	14
7:45	6	5	11
8:00	4	2	6
8:15	4	15	19
8:30	5	3	8
8:45	5	6	11
9:00	1	3	4
9:15	7	5	12
9:30	2	6	8
9:45	1	5	6
10:00	5	5	10
10:15	3	6	9
10:30	3	1	4
10:45	1	2	3
11:00	2	2	4
11:15	3	0	3
11:30	3	2	5
11:45	0	2	2
Total	228	295	523
Peak Volume	12:00 PM	5:45	5:45
Peak Factor	0.800	0.750	0.813

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	3	2	5
12:15	0	1	1
12:30	2	0	2
12:45	1	1	2
1:00	0	0	0
1:15	0	0	0
1:30	0	1	1
1:45	1	1	2
2:00	0	1	1
2:15	0	1	1
2:30	0	2	2
2:45	0	1	1
3:00	0	0	0
3:15	0	1	1
3:30	1	1	2
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	1	1
5:30	0	0	0
5:45	0	0	0
6:00	0	0	0
6:15	0	0	0
6:30	1	0	1
6:45	0	3	3
7:00	0	1	1
7:15	2	0	2
7:30	1	2	3
7:45	1	2	3
8:00	4	1	5
8:15	1	0	1
8:30	3	6	9
8:45	2	5	7
9:00	2	6	8
9:15	4	5	9
9:30	4	6	10
9:45	4	6	10
10:00	3	4	7
10:15	6	6	12
10:30	6	5	11
10:45	9	5	14
11:00	6	5	11
11:15	5	9	14
11:30	7	4	11
11:45	3	7	10
Total	82	102	184
Peak Volume	10:15	11:00	10:30
Peak Factor	27	25	50
	0.750	0.694	0.893

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	4	15	19
12:15	7	8	15
12:30	9	5	14
12:45	9	7	16
1:00	9	10	19
1:15	8	5	13
1:30	10	11	21
1:45	6	9	15
2:00	13	10	23
2:15	9	9	18
2:30	5	8	13
2:45	6	15	21
3:00	5	15	20
3:15	3	4	7
3:30	9	12	21
3:45	4	10	14
4:00	5	10	15
4:15	7	3	10
4:30	5	12	17
4:45	10	6	16
5:00	8	6	14
5:15	7	9	16
5:30	7	9	16
5:45	9	9	18
6:00	11	9	20
6:15	6	4	10
6:30	6	6	12
6:45	4	8	12
7:00	6	6	12
7:15	3	5	8
7:30	4	7	11
7:45	2	3	5
8:00	3	7	10
8:15	4	4	8
8:30	2	6	8
8:45	7	2	9
9:00	1	3	4
9:15	2	2	4
9:30	5	3	8
9:45	2	3	5
10:00	4	1	5
10:15	1	2	3
10:30	0	1	1
10:45	1	0	1
11:00	1	2	3
11:15	0	0	0
11:30	0	0	0
11:45	0	1	1
Total	249	302	551
Peak	1:30	2:15	1:30
Volume	38	47	77
Peak Factor	0.731	0.783	0.837

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	1	0	1
12:15	0	1	1
12:30	1	1	2
12:45	1	0	1
1:00	0	0	0
1:15	1	0	1
1:30	0	0	0
1:45	0	0	0
2:00	0	1	1
2:15	0	1	1
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	2	2
5:15	0	0	0
5:30	0	2	2
5:45	0	0	0
6:00	1	1	2
6:15	2	0	2
6:30	3	1	4
6:45	1	3	4
7:00	1	3	4
7:15	4	8	12
7:30	3	10	13
7:45	3	13	16
8:00	13	16	29
8:15	19	19	38
8:30	9	25	34
8:45	10	17	27
9:00	7	8	15
9:15	7	10	17
9:30	5	10	15
9:45	9	3	12
10:00	5	6	11
10:15	5	3	8
10:30	2	8	10
10:45	9	8	17
11:00	9	9	18
11:15	9	6	15
11:30	6	8	14
11:45	6	6	12
Total	152	209	361
Peak Volume	51	77	128
Peak Factor	0.671	0.770	0.842

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	5	8	13
12:15	4	11	15
12:30	7	8	15
12:45	4	11	15
1:00	11	7	18
1:15	11	9	20
1:30	3	9	12
1:45	6	9	15
2:00	13	10	23
2:15	9	9	18
2:30	10	7	17
2:45	8	15	23
3:00	9	16	25
3:15	11	18	29
3:30	8	14	22
3:45	7	14	21
4:00	8	13	21
4:15	11	9	20
4:30	9	8	17
4:45	6	8	14
5:00	9	7	16
5:15	6	12	18
5:30	13	9	22
5:45	10	14	24
6:00	7	12	19
6:15	6	17	23
6:30	10	11	21
6:45	8	7	15
7:00	9	9	18
7:15	10	5	15
7:30	6	9	15
7:45	6	7	13
8:00	2	6	8
8:15	10	4	14
8:30	8	6	14
8:45	3	9	12
9:00	3	2	5
9:15	3	0	3
9:30	1	3	4
9:45	1	0	1
10:00	0	5	5
10:15	1	0	1
10:30	1	1	2
10:45	2	1	3
11:00	1	1	2
11:15	3	0	3
11:30	1	1	2
11:45	0	0	0
Total	300	371	671
Peak Volume	40	63	99
Peak Factor	0.769	0.875	0.853
Grand Total AADT	2963	3882	6845
	AADT: 1,169	AADT: 1,169	

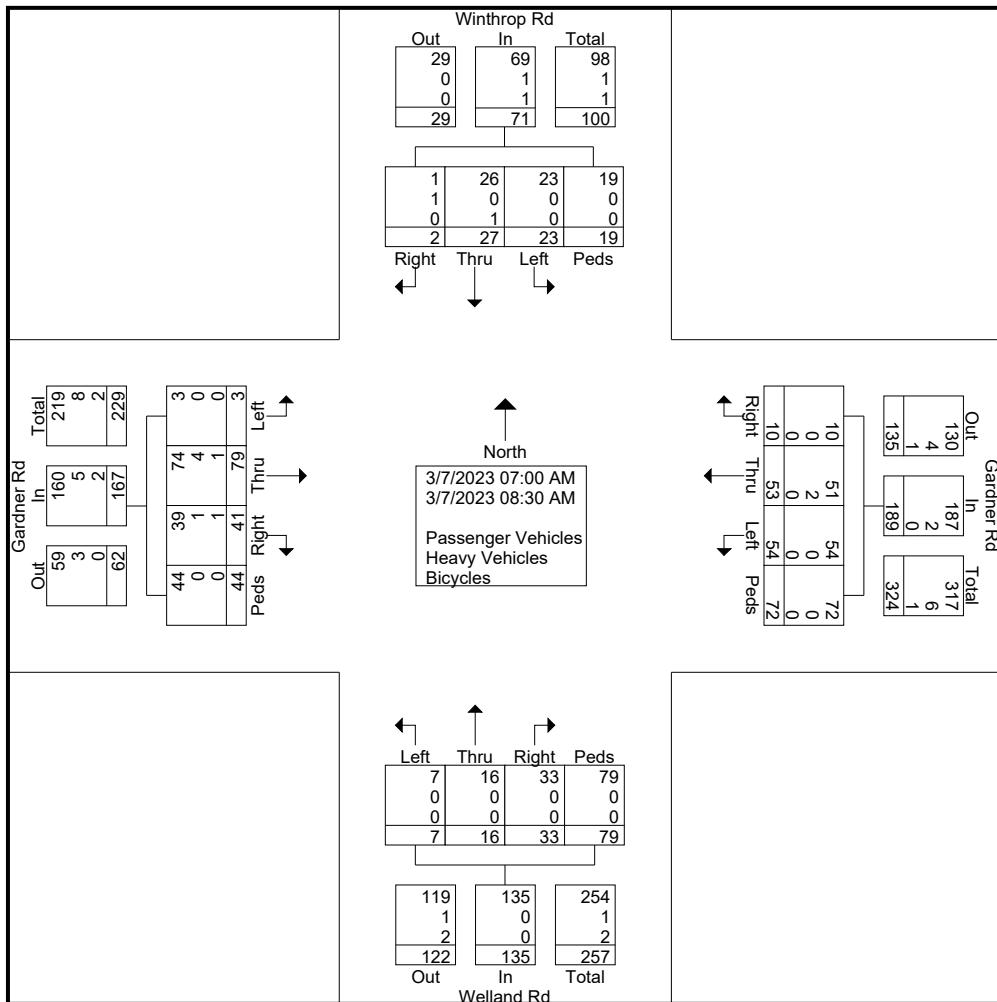
2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	2	4	6	2	7	6	2	17	6	1	1	2	10	1	8	0	2	11	44
07:15 AM	0	2	2	1	5	2	10	7	5	24	3	3	0	6	12	3	10	0	2	15	56
07:30 AM	0	7	4	2	13	1	4	5	15	25	2	0	2	16	20	7	10	0	5	22	80
07:45 AM	1	10	5	0	16	1	13	8	8	30	0	4	0	9	13	9	16	1	1	27	86
Total	1	19	13	7	40	6	34	26	30	96	11	8	3	33	55	20	44	1	10	75	266
08:00 AM	0	5	4	5	14	1	9	17	24	51	8	7	3	30	48	12	6	1	20	39	152
08:15 AM	1	2	3	5	11	2	5	8	14	29	11	0	1	12	24	7	20	0	11	38	102
08:30 AM	0	1	3	2	6	1	5	3	4	13	3	1	0	4	8	2	9	1	3	15	42
Grand Total	2	27	23	19	71	10	53	54	72	189	33	16	7	79	135	41	79	3	44	167	562
Apprch %	2.8	38	32.4	26.8		5.3	28	28.6	38.1		24.4	11.9	5.2	58.5		24.6	47.3	1.8	26.3		
Total %	0.4	4.8	4.1	3.4	12.6	1.8	9.4	9.6	12.8	33.6	5.9	2.8	1.2	14.1	24	7.3	14.1	0.5	7.8	29.7	
Passenger Vehicles	50	96.3	100	100	97.2	100	96.2	100	100	98.9	100	100	100	100	100	95.1	93.7	100	100	95.8	98
% Passenger Vehicles																					
Heavy Vehicles	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	1	4	0	0	5	8
% Heavy Vehicles	50	0	0	0	1.4	0	3.8	0	0	1.1	0	0	0	0	0	2.4	5.1	0	0	3	1.4
Bicycles	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	3
% Bicycles	0	3.7	0	0	1.4	0	0	0	0	0	0	0	0	0	0	2.4	1.3	0	0	1.2	0.5

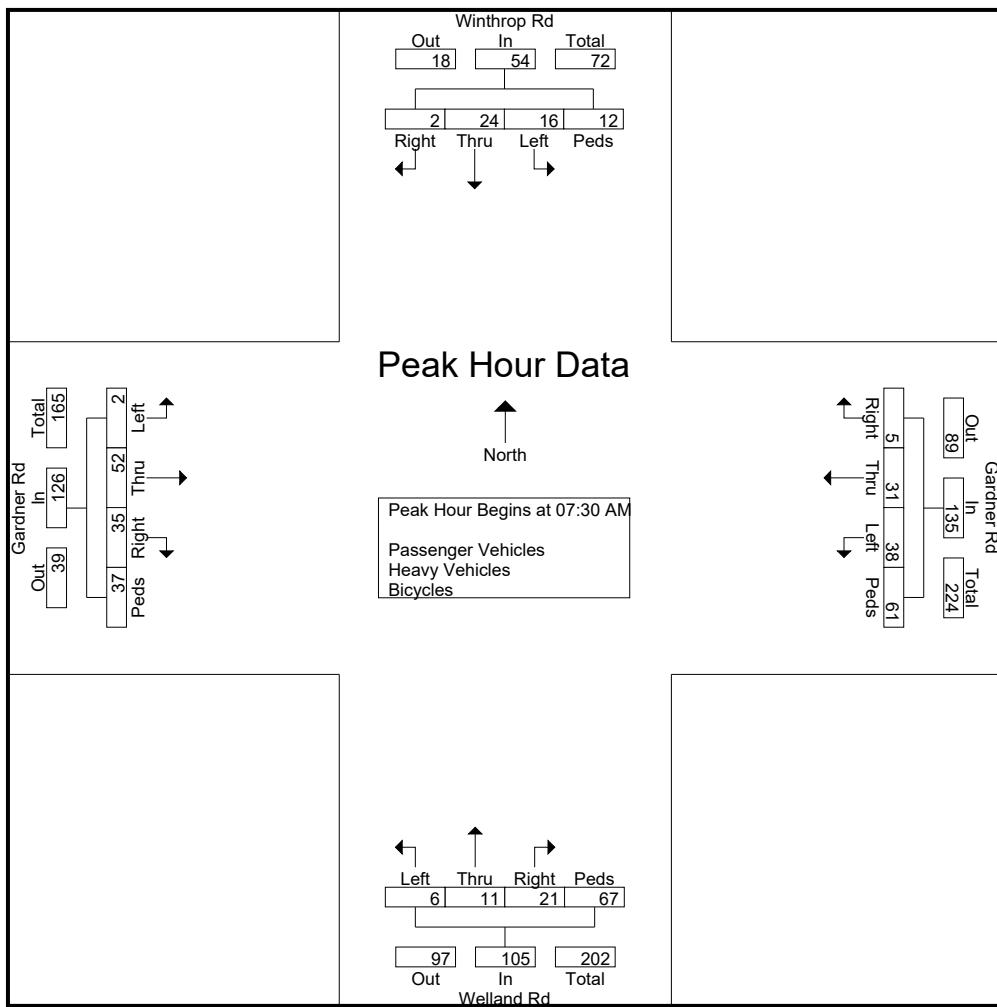


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	7	4	2	13	1	4	5	15	25	2	0	2	16	20	7	10	0	5	22	80
07:45 AM	1	10	5	16		1	13												1		
08:00 AM	0	5	4	5	14	1	9	17	24	51	8	7	3	30	48	12	6	1	20	39	152
08:15 AM	1	2	3	5	11	2	5	8	14	29	11					20	0	11	38	102	
Total Volume	2	24	16	12	54	5	31	38	61	135	21	11	6	67	105	35	52	2	37	126	420
% App. Total	3.7	44.4	29.6	22.2		3.7	23	28.1	45.2		20	10.5	5.7	63.8		27.8	41.3	1.6	29.4		
PHF	.500	.600	.800	.600	.844	.625	.596	.559	.635	.662	.477	.393	.500	.558	.547	.729	.650	.500	.463	.808	.691

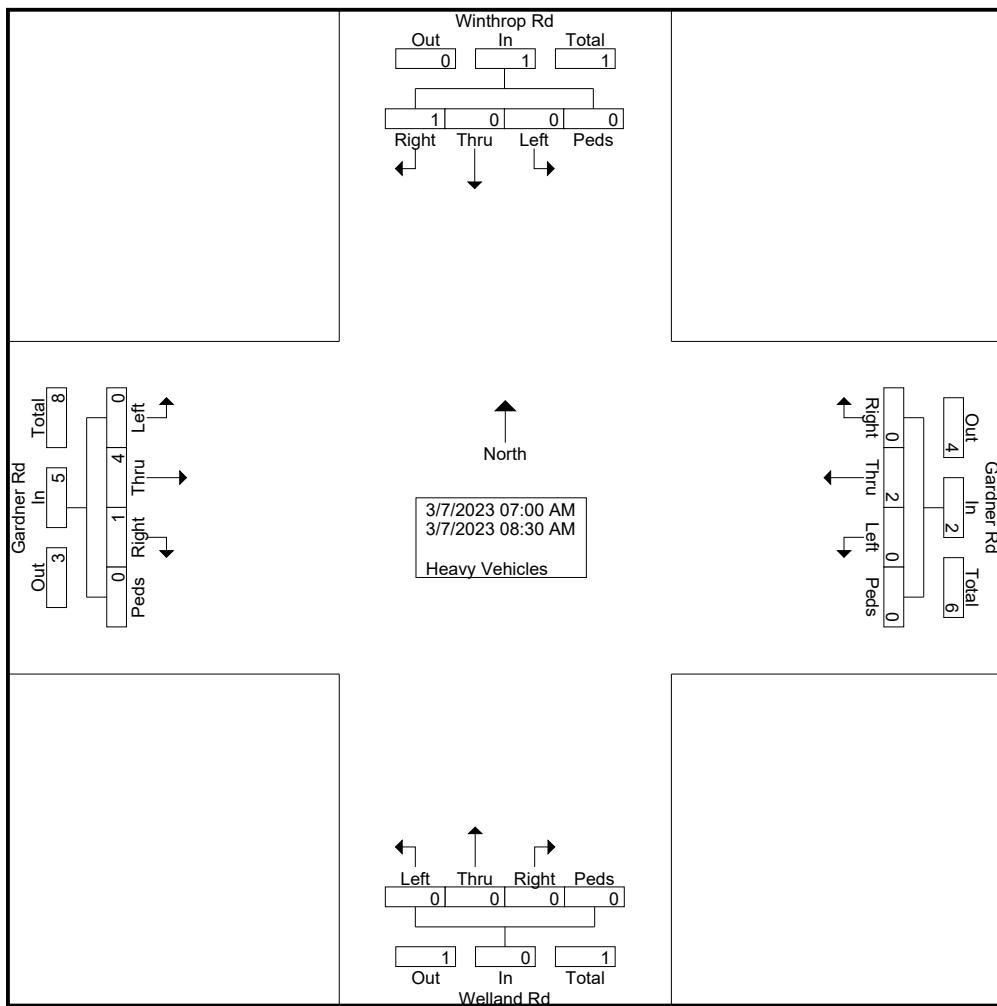


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	4
*** BREAK ***																					
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	1	4	0	0	5	8
Apprch %	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	20	80	0	0	0	
Total %	12.5	0	0	0	12.5	0	25	0	0	25	0	0	0	0	0	12.5	50	0	0	62.5	

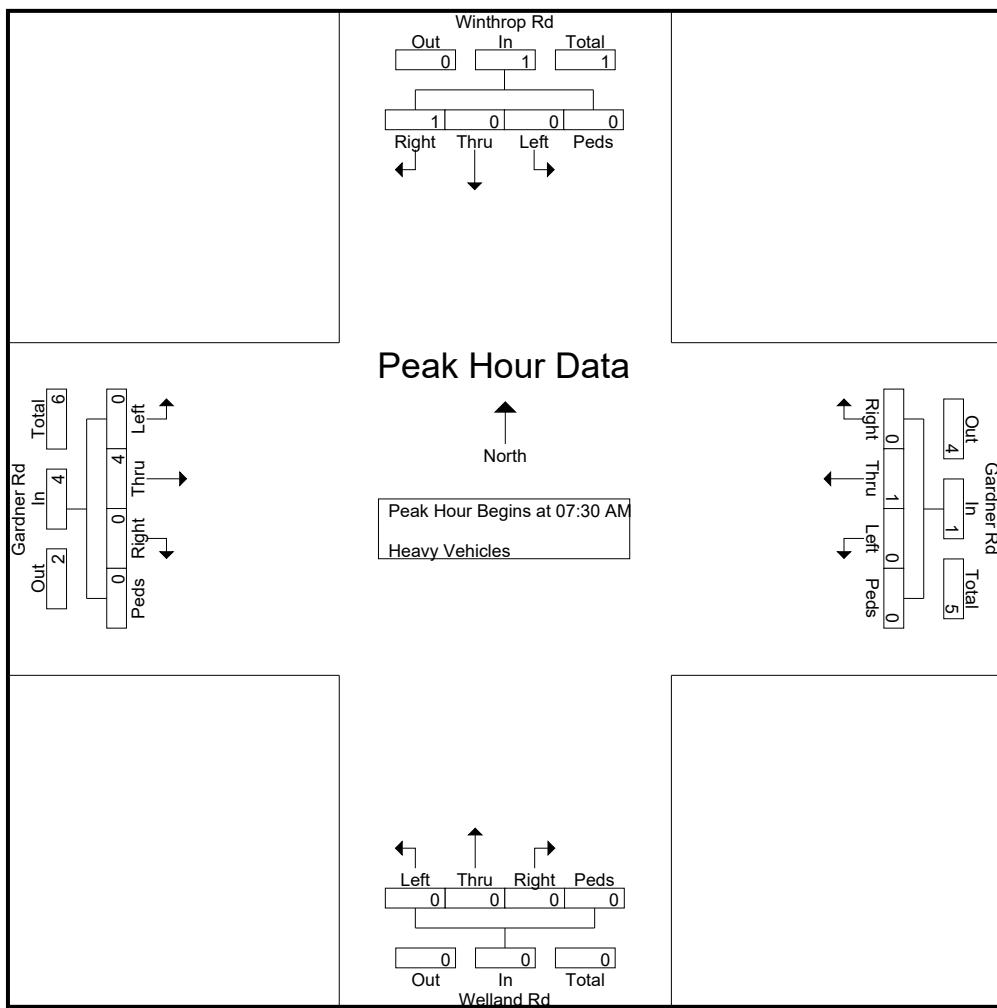


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
Total Volume	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	6
% App. Total	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	100	0	0	0	0
PHF	.250	.000	.000	.000	.250	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.500

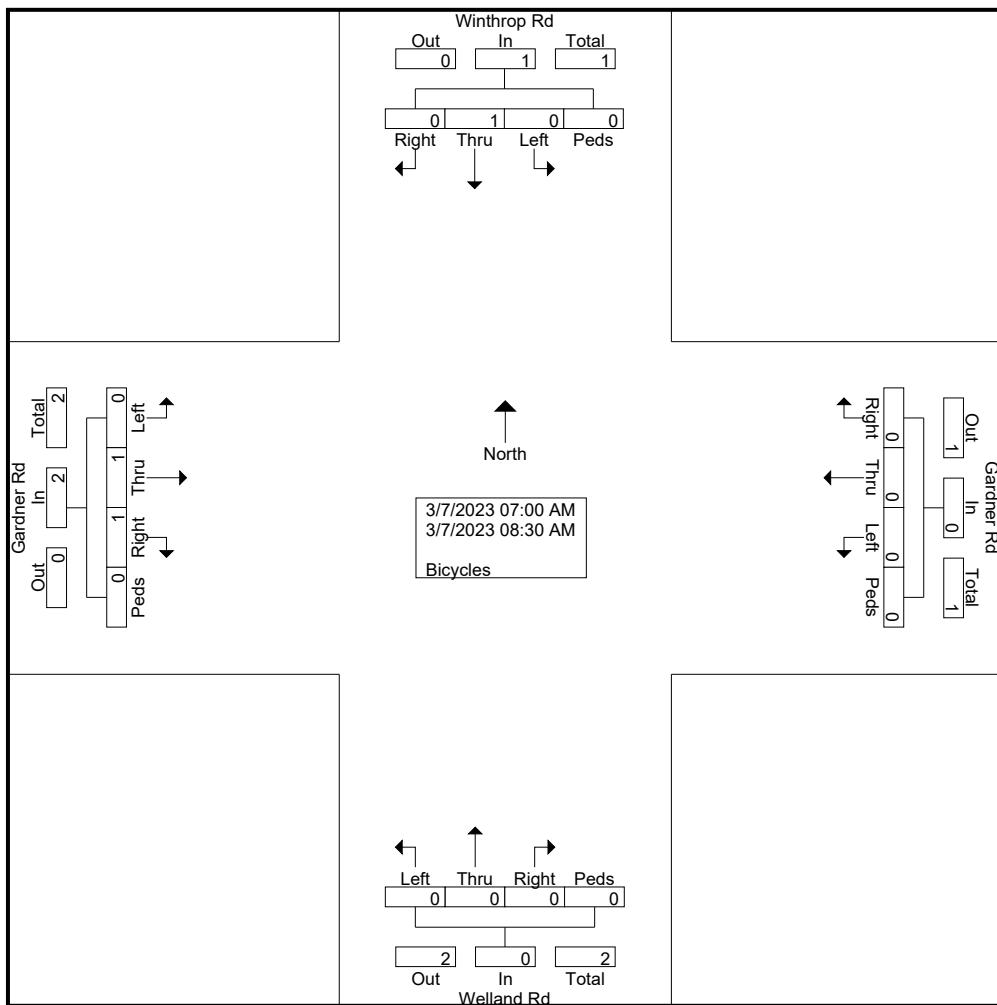


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
*** BREAK ***																					
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	3
Apprch %	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0
Total %	0	33.3	0	0	33.3	0	0	0	0	0	0	0	0	0	0	0	33.3	33.3	0	0	66.7

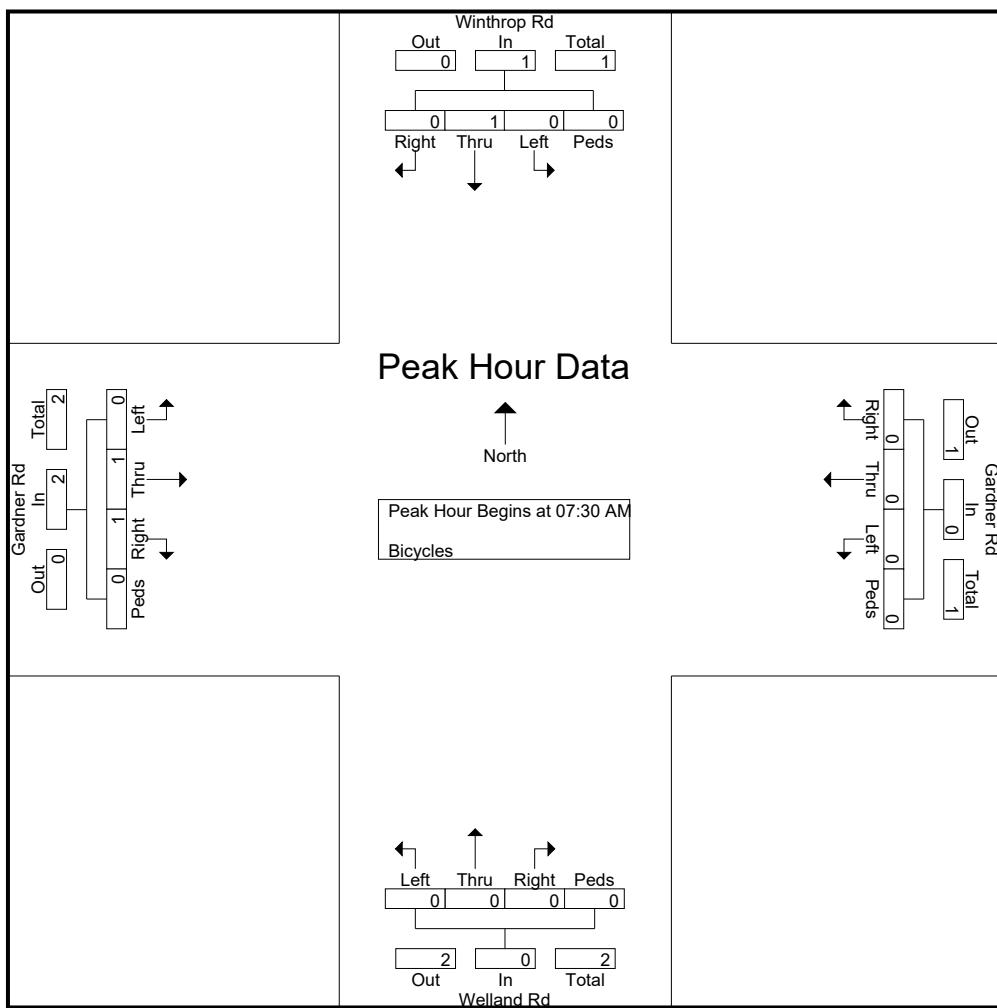


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	3	
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.750	



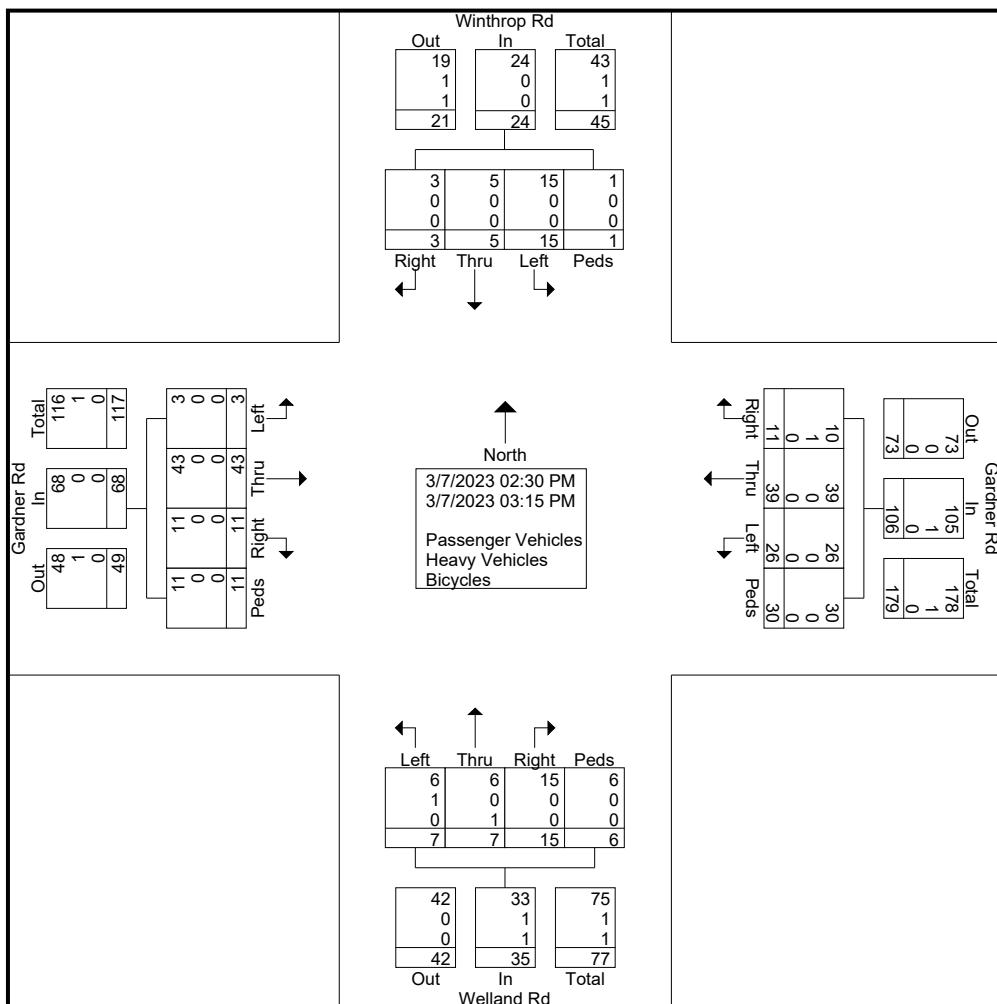
2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
02:30 PM	0	0	2	0	2	3	8	6	2	19	2	2	2	4	10	2	8	2	1	13	44
02:45 PM	3	1	5	0	9	3	9	10	7	29	6	1	2	0	9	5	10	0	2	17	64
Total	3	1	7	0	11	6	17	16	9	48	8	3	4	4	19	7	18	2	3	30	108
03:00 PM	0	2	4	1	7	3	13	4	18	38	4	1	1	0	6	2	20	0	6	28	79
03:15 PM	0	2	4	0	6	2	9	6	3	20	3	3	2	2	10	2	5	1	2	10	46
Grand Total	3	5	15	1	24	11	39	26	30	106	15	7	7	6	35	11	43	3	11	68	233
Apprch %	12.5	20.8	62.5	4.2		10.4	36.8	24.5	28.3		42.9	20	20	17.1		16.2	63.2	4.4	16.2		
Total %	1.3	2.1	6.4	0.4	10.3	4.7	16.7	11.2	12.9	45.5	6.4	3	3	2.6	15	4.7	18.5	1.3	4.7	29.2	
Passenger Vehicles % Passenger Vehicles	100	100	100	100	100	90.9	100	100	100	99.1	100	85.7	85.7	100	94.3	100	100	100	100	100	98.7
Heavy Vehicles % Heavy Vehicles	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2
Bicycles % Bicycles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0.9
	0	0	0	0	0	0	0	0	0	0	0	0	14.3	0	0	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0	0	14.3	0	0	0	0	0	0	0	0.4

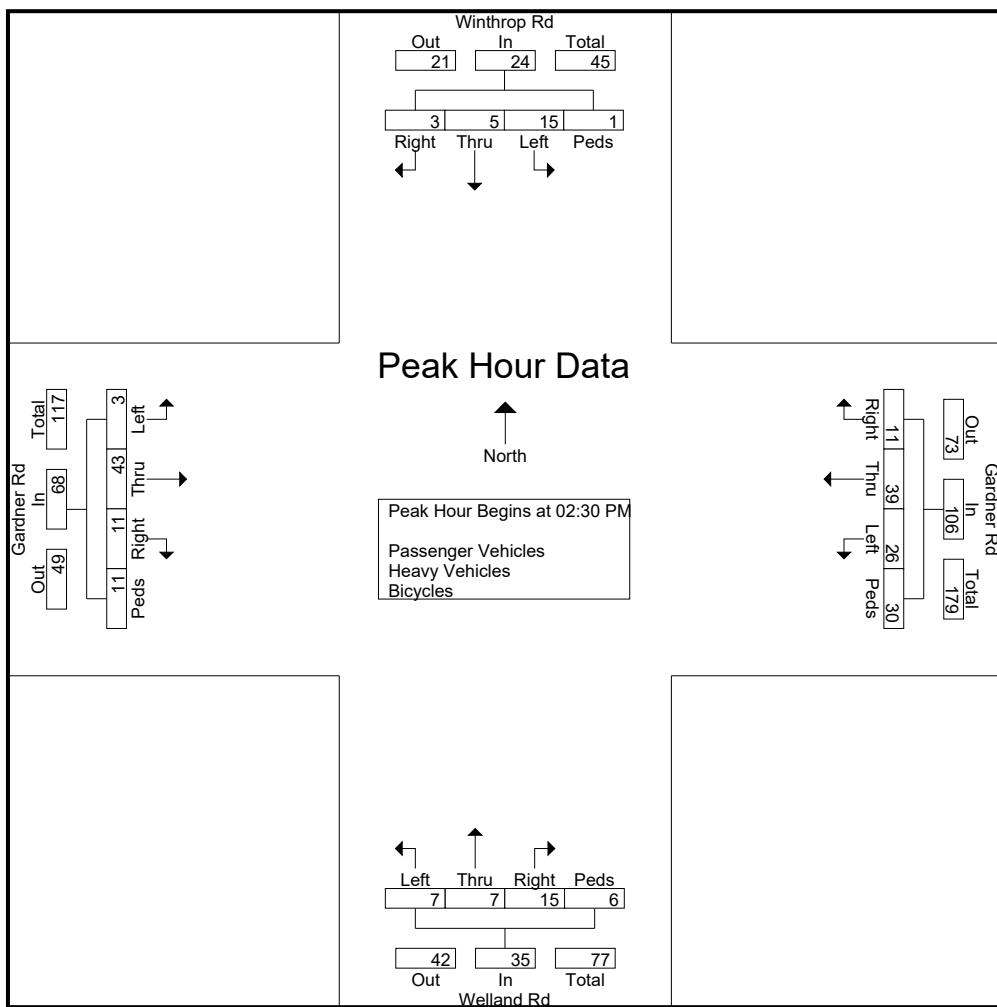


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:30 PM																					
02:30 PM	0	0	2	0	2	3	8	6	2	19	2	2	2	4	10	2	8	2			
02:45 PM	3	1	5	0	9	3	9	10	7	29	6	1	2	0	9	5	10	0	2	17	
03:00 PM	0	2	4	1	7	3	13	4	18	38	4	1	1	0	6	2	20	0	6	79	
03:15 PM	0	2	4	0	6	2	9	6	3	20	3	3									
Total Volume	3	5	15	1	24	11	39	26	30	106	15	7	7	6	35	11	43	3	11	68	233
% App. Total	12.5	20.8	62.5	4.2		10.4	36.8	24.5	28.3		42.9	20	20	17.1		16.2	63.2	4.4	16.2		
PHF	.250	.625	.750	.250	.667	.917	.750	.650	.417	.697	.625	.583	.875	.375	.875	.550	.538	.375	.458	.607	.737

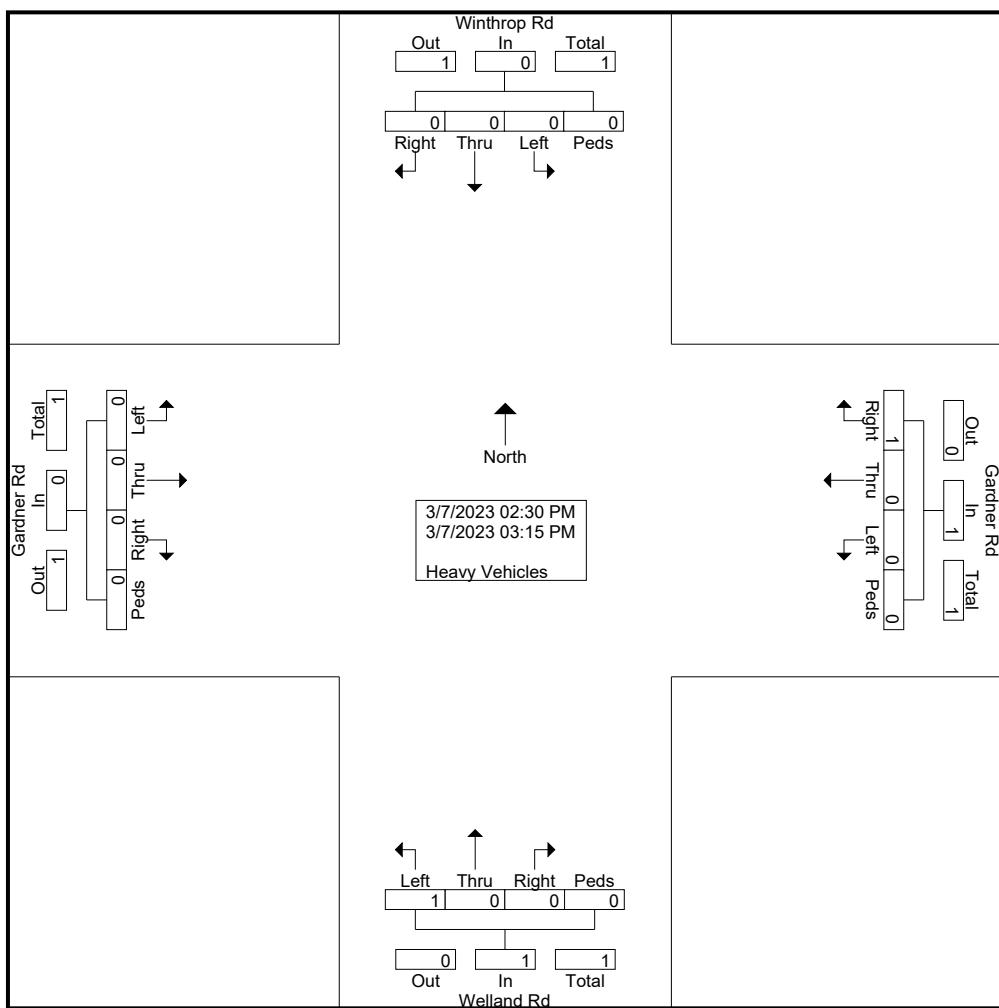


2.
Town of Brookline
 Engineering/Transportation Division

Gardner Rd at
 Winthrop Rd and Welland Rd
 Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
 Site Code : 00000003
 Start Date : 3/7/2023
 Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
02:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2
Apprch %	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	50	0	0	0	50	0	0	50	0	50	0	0	0	0	0	0

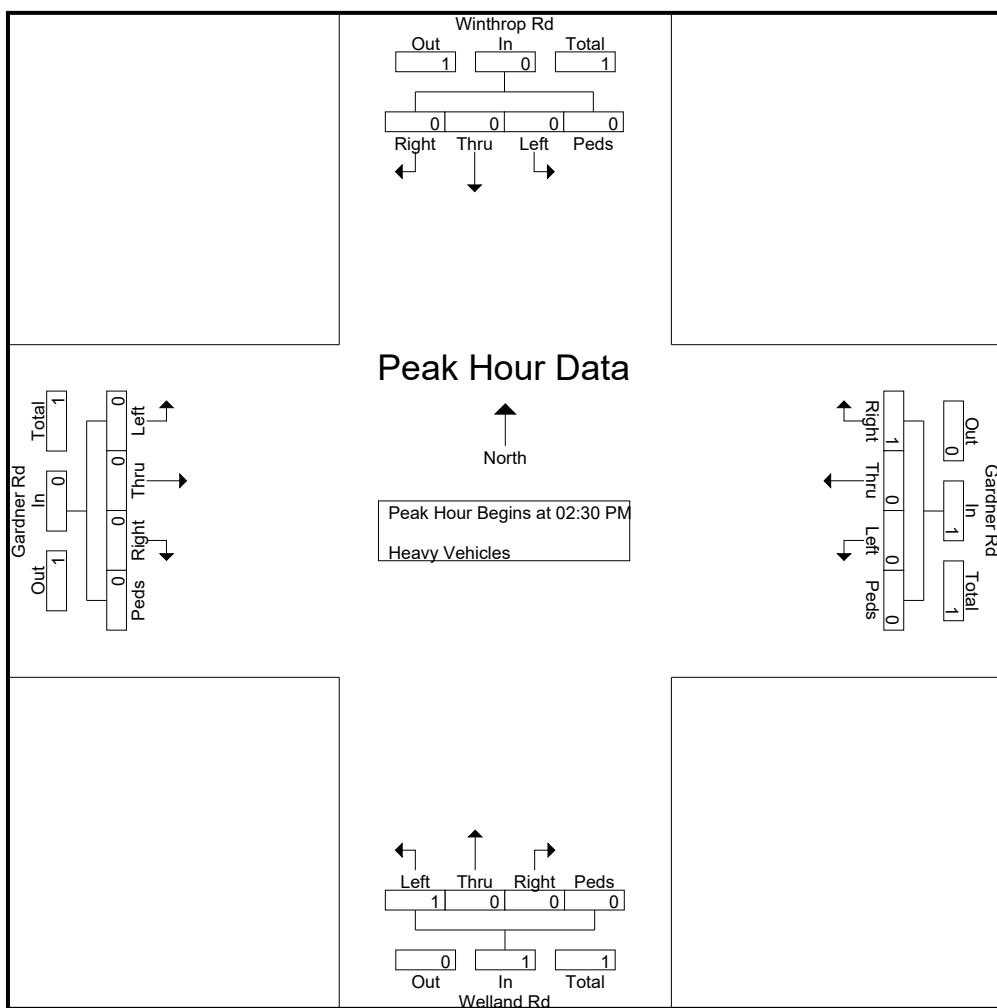


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:30 PM																					
02:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2
% App. Total	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500

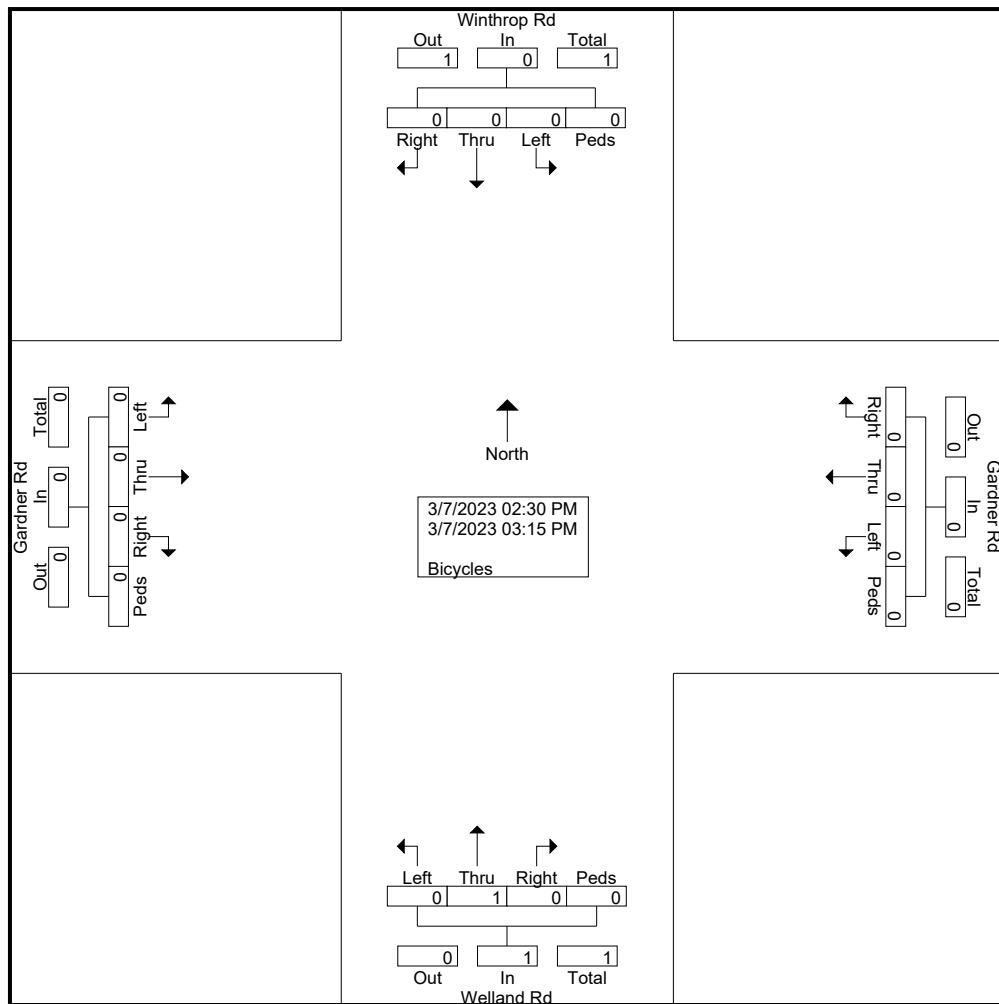


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Apprch %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0

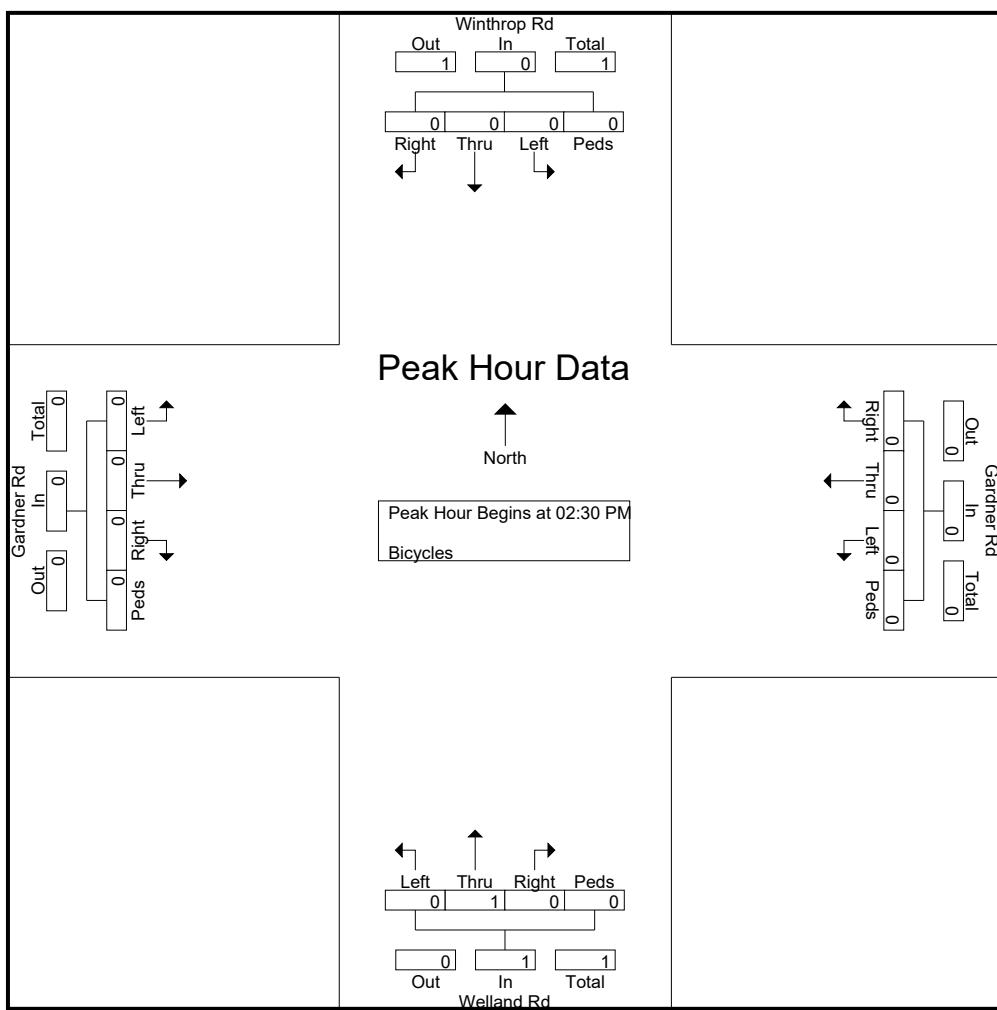


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:30 PM																					
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250



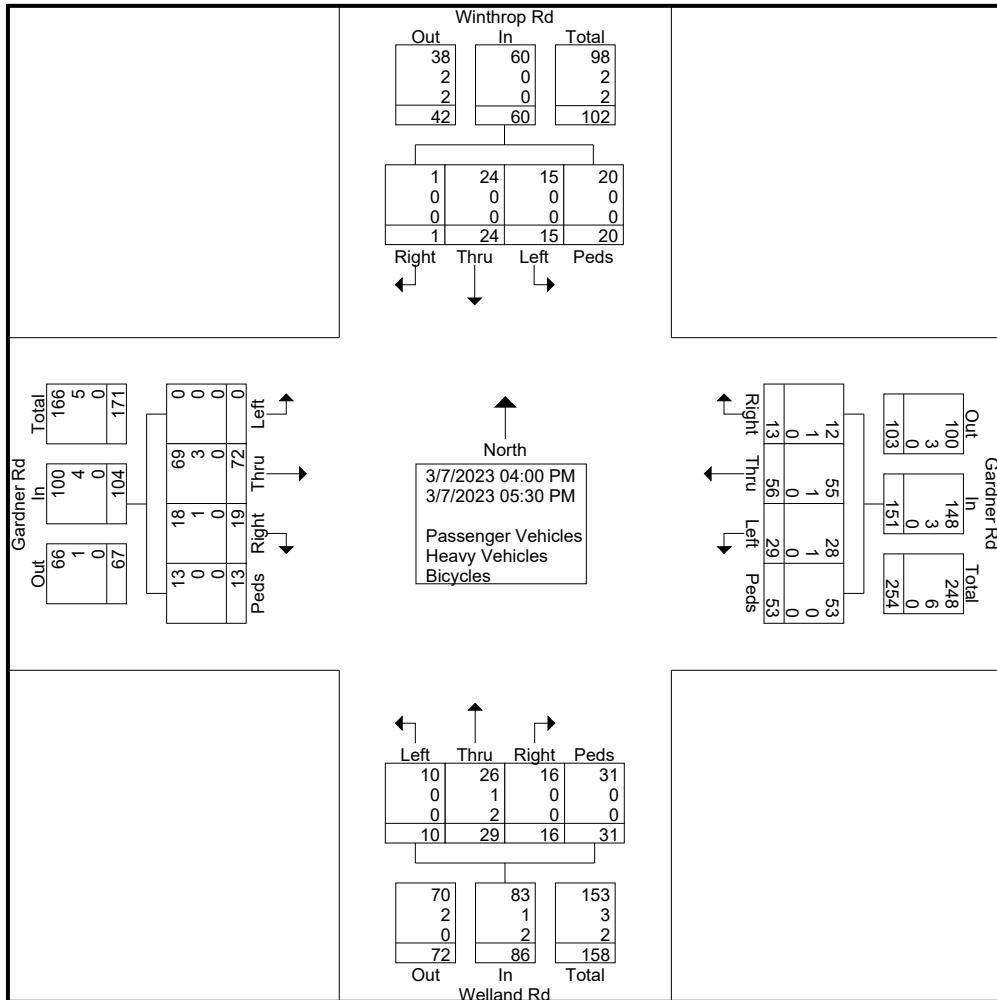
2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland PM 3-7-2023
Site Code : 00000004
Start Date : 3/7/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	3	3	0	6	2	7	1	13	23	5	7	2	4	18	3	12	0	2	17	64
04:15 PM	0	5	2	4	11	3	5	7	10	25	4	3	1	7	15	4	8	0	0	12	63
04:30 PM	0	1	4	1	6	3	6	0	5	14	1	2	1	4	8	1	5	0	0	6	34
04:45 PM	0	3	1	3	7	1	10	4	3	18	2	5	0	0	7	1	10	0	1	12	44
Total	0	12	10	8	30	9	28	12	31	80	12	17	4	15	48	9	35	0	3	47	205
05:00 PM	1	5	2	8	16	0	10	6	6	22	1	4	4	5	14	4	13	0	5	22	74
05:15 PM	0	4	0	1	5	4	10	5	8	27	2	3	1	6	12	1	12	0	4	17	61
05:30 PM	0	3	3	3	9	0	8	6	8	22	1	5	1	5	12	5	12	0	1	18	61
Grand Total	1	24	15	20	60	13	56	29	53	151	16	29	10	31	86	19	72	0	13	104	401
Apprch %	1.7	40	25	33.3		8.6	37.1	19.2	35.1		18.6	33.7	11.6	36		18.3	69.2	0	12.5		
Total %	0.2	6	3.7	5	15	3.2	14	7.2	13.2	37.7	4	7.2	2.5	7.7	21.4	4.7	18	0	3.2	25.9	
Passenger Vehicles	100	100	100	100	100	92.3	98.2	96.6	100	98	100	89.7	100	100	96.5	94.7	95.8	0	100	96.2	97.5
% Passenger Vehicles											0	1	0	0	1	1	3	0	0	4	8
Heavy Vehicles	0	0	0	0	0	1	1	1	0	3	0	1	0	0	1	1	3	0	0	0	2
% Heavy Vehicles	0	0	0	0	0	7.7	1.8	3.4	0	2	0	3.4	0	0	1.2	5.3	4.2	0	0	0	3.8
Bicycles	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	6.9	0	0	2.3	0	0	0	0	0	0.5

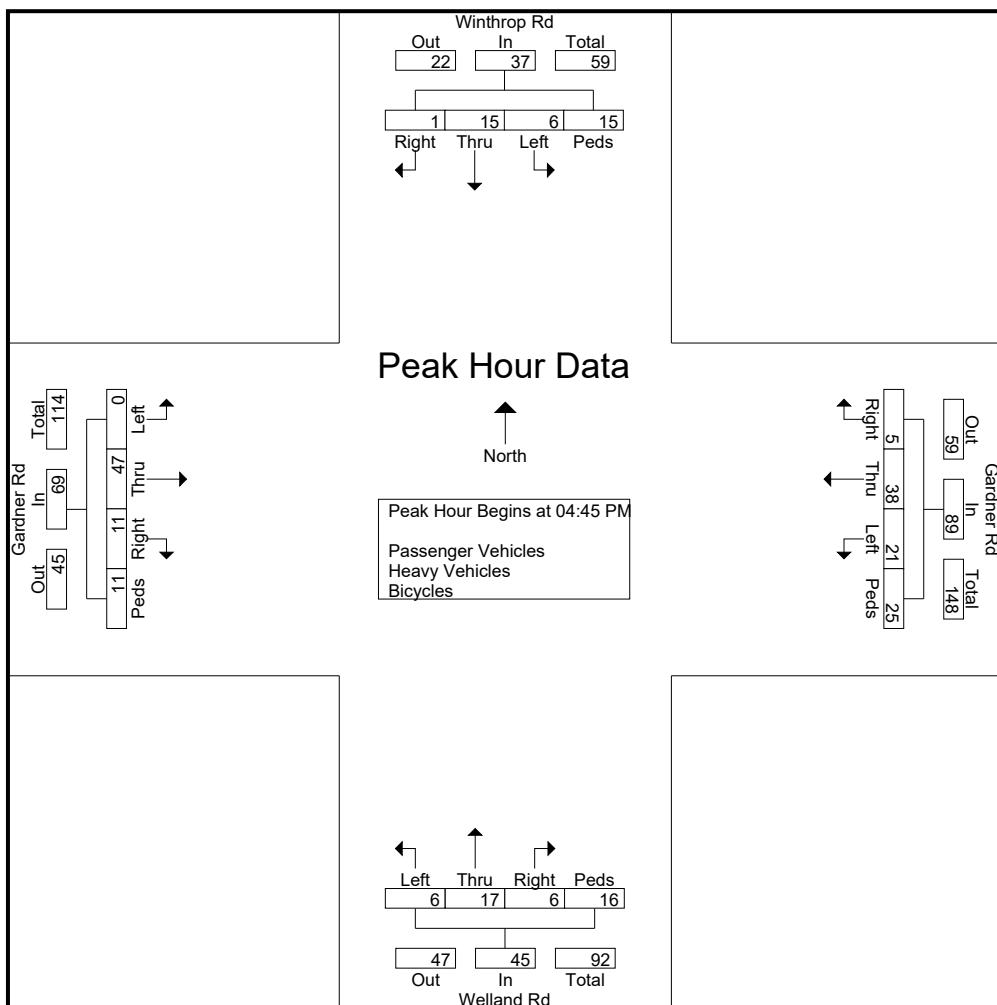


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland PM 3-7-2023
Site Code : 00000004
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North				Gardner Rd From East				Welland Rd From South				Gardner Rd From West								
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	3	1	3	7	1	10			2	5										
05:00 PM	1	5	2	8	16	0	10	6	6	22	1	4	4	5	14	4	13	0	5	22	74
05:15 PM	0	4	0	1	5	4	10	5	8	27	2	3	1	6							
05:30 PM	0	3	3	3	9	0	8	6	8	22	1	5	1	5	12	5	12	0	1	18	61
Total Volume	1	15	6	15	37	5	38	21	25	89	6	17	6	16	45	11	47	0	11	69	240
% App. Total	2.7	40.5	16.2	40.5		5.6	42.7	23.6	28.1		13.3	37.8	13.3	35.6		15.9	68.1	0	15.9		
PHF	.250	.750	.500	.469	.578	.313	.950	.875	.781	.824	.750	.850	.375	.667	.804	.550	.904	.000	.550	.784	.811

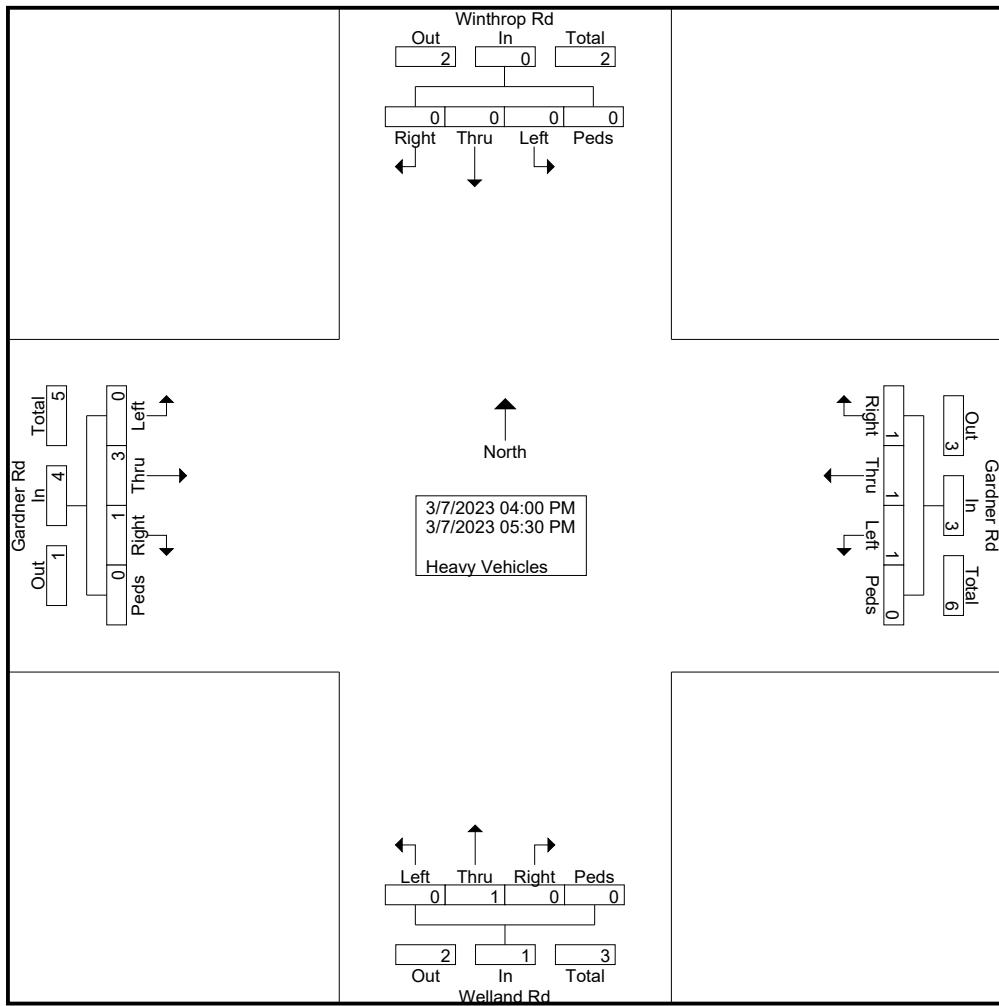


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Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

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	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	1	2	0	0	3	5
*** BREAK ***																					
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	1	0	0	1	3
*** BREAK ***																					
Grand Total	0	0	0	0	0	1	1	1	0	3	0	1	0	0	1	1	3	0	0	4	8
Apprch %	0	0	0	0	0	33.3	33.3	33.3	0	0	0	100	0	0	0	25	75	0	0	0	0
Total %	0	0	0	0	0	12.5	12.5	12.5	0	37.5	0	12.5	0	0	12.5	12.5	37.5	0	0	50	

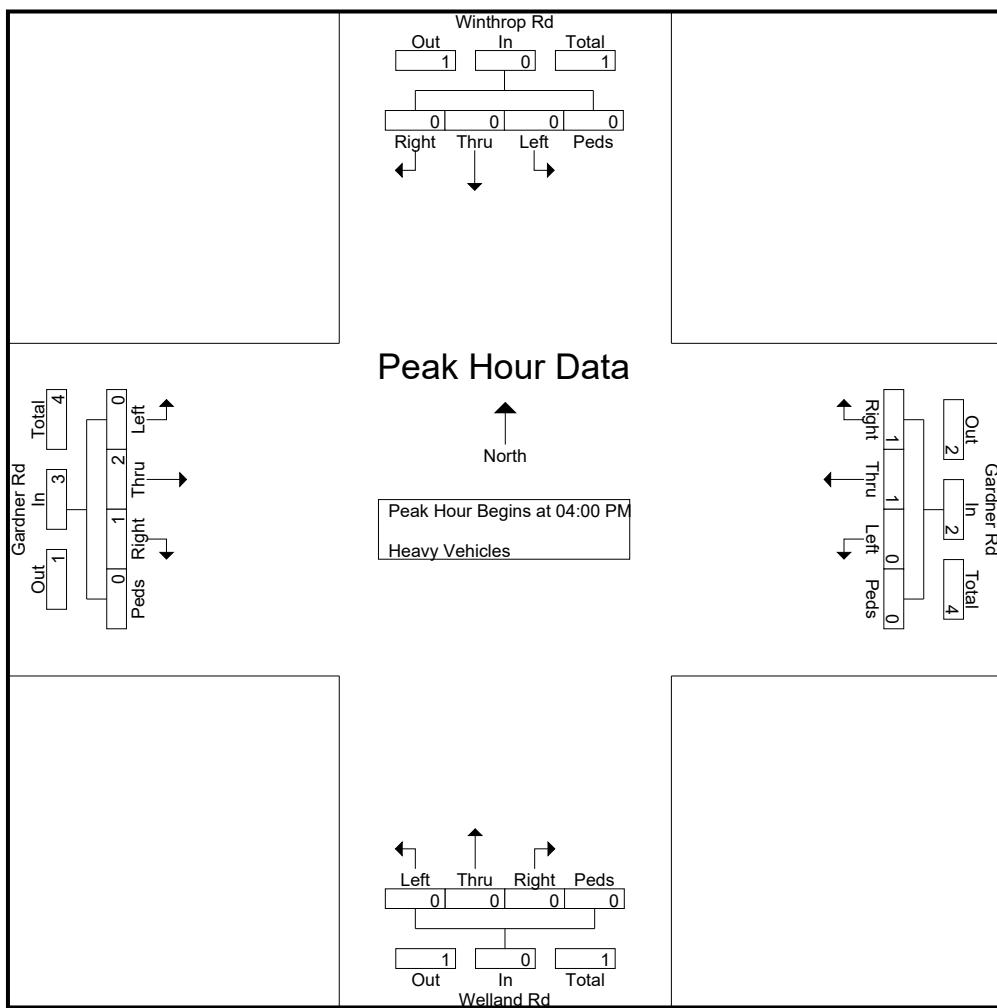


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Engineering/Transportation Division

Gardner Rd at
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File Name : Gardner @ Winthrop @ welland PM 3-7-2023
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Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	1	2	0	0	3	5
% App. Total	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	33.3	66.7	0	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.250	.000	.000	.500	.000	.000	.000	.000	.000	.250	.500	.000	.000	.375	.625



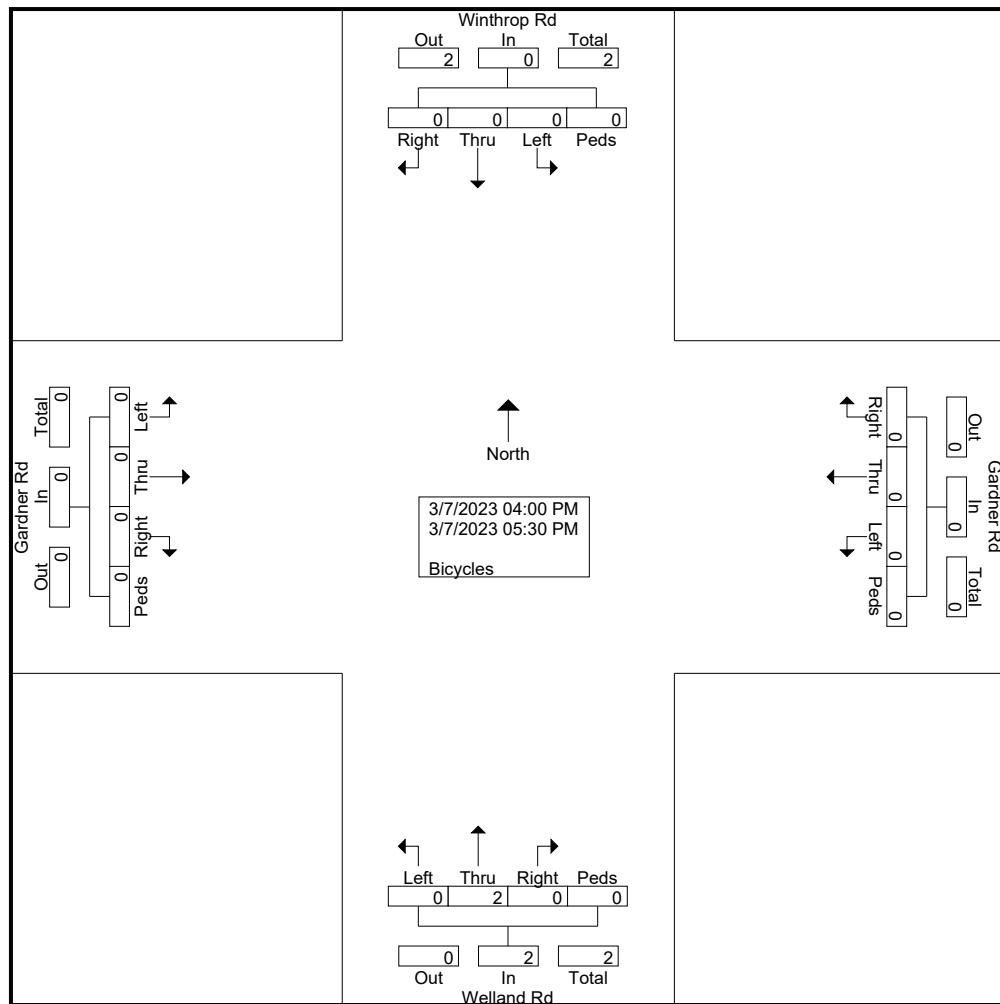
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Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland PM 3-7-2023
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Start Date : 3/7/2023
Page No : 1

Groups Printed- Bicycles

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
*** BREAK ***																					
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Apprch %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0

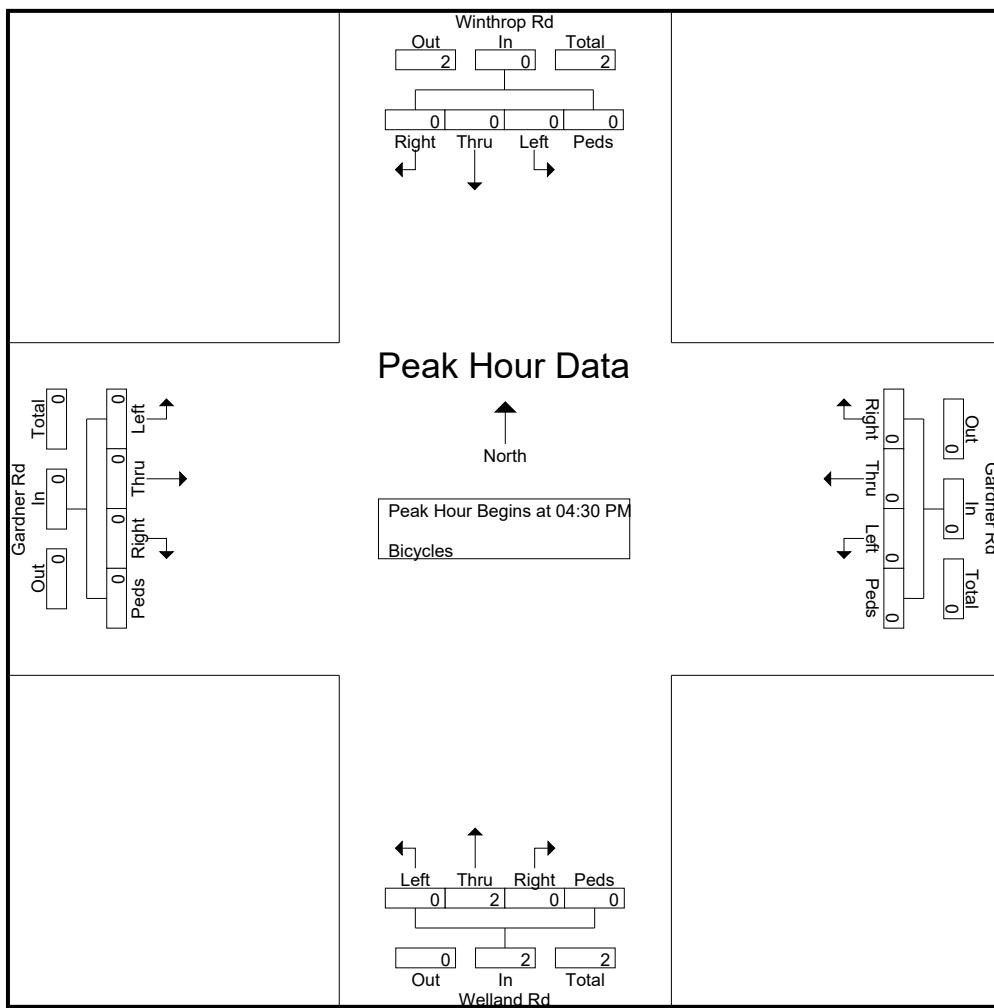


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Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland PM 3-7-2023
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	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
% App. Total	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.500



2.

Winthrop Rd Northbound Looking Right Stop Control



Winthrop Rd Northbound Looking Left Stop Control



2.

Wealland Rd Northbound Looking Right Stop Control



Welland Rd Northbound Looking Left Stop Control



2.

Hancock Rd Norghtbound Looking Right Stop Control



Hancock Rd Northbound Looking Left Stop Control



2.

Brookline Police Crash Data									
Case #	Date	Day	Time	Location	# of Vehicles	INJ	Report	Reason	Citation
	2/28/2019	Thursday	16:53	Welland Rd/Gardner Rd	2	N	N	Fail Use Care in Backing	N
									Multi Vehicle/Property
									Welland Rd / Gardner Rd
									Frequency I

Appendix

- Resident Request
- Traffic Count Data
- Sight Line Calculations
- Sight Line Photos
- Crash Data

Daniel Martin

From: Todd Kirrane
Sent: Monday, July 22, 2019 4:39 PM
To: Daniel Martin
Subject: FW: Crosswalks/stop signs at Winthrop and Gardner intersection

Todd Kirrane
Transportation Administrator
Town of Brookline, MA
www.brooklinema.gov/transportation
www.twitter.com/BlineTransport
www.facebook.com/BrooklineDPW

-----Original Message-----

From: Ned Sebelius [mailto:nsebelius@gmail.com]
Sent: Friday, December 07, 2018 11:28 AM
To: Todd Kirrane
Cc: Lisa Rockefeller
Subject: Crosswalks/stop signs at Winthrop and Gardner intersection

Hi Todd,

I'm here in the office at townhall and they have told me to email you about our interest in getting stop signs and cross walks put in at the intersection of Gardner Road and Winthrop. We live at 87 Gardner Road and have a number of children on our block who have to cross that intersection to walk to Pierce. The five-way intersection there has only two stops signs and we get a lot of speeding traffic with no safe place to cross.

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th	
		Total												Total		
12:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	19
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	19
2:00	1	2	0	0	0	0	0	0	0	0	0	0	0	3	15	20
3:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2	13	14
4:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	15	20
5:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	17	20
6:00	1	1	2	1	0	0	0	0	0	0	0	0	0	5	22	27
7:00	9	6	13	7	0	0	0	0	0	0	0	0	0	35	20	26
8:00	2	11	18	1	0	0	0	0	0	0	0	0	0	32	21	24
9:00	2	5	7	5	0	0	0	0	0	0	0	0	0	19	22	27
10:00	2	9	11	1	0	0	0	0	0	0	0	0	0	23	21	25
11:00	0	2	5	0	0	0	0	0	0	0	0	0	0	7	22	25
12:00 PM	1	2	16	3	0	0	0	0	0	0	0	0	0	22	23	27
1:00	1	5	9	3	0	0	0	0	0	0	0	0	0	18	22	24
2:00	2	7	13	5	3	0	0	0	0	0	0	0	0	30	23	28
3:00	0	9	10	2	1	0	0	0	0	0	0	0	0	22	22	26
4:00	1	12	17	4	0	0	0	0	0	0	0	0	0	34	22	25
5:00	2	14	24	5	1	0	0	0	0	0	0	0	0	46	22	25
6:00	1	12	14	2	0	0	0	0	0	0	0	0	0	29	21	24
7:00	1	6	11	0	0	0	0	0	0	0	0	0	0	18	22	25
8:00	2	1	6	1	0	0	0	0	0	0	0	0	0	10	21	26
9:00	0	1	6	1	0	0	0	0	0	0	0	0	0	8	23	26
10:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2	23	24
11:00	1	1	1	2	0	0	0	0	0	0	0	0	0	5	21	26
Total	34	107	185	43	5	0	0	0	0	0	0	0	0	374		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	20.5			
10 MPH Pace Speed	15-24			
Number in Pace	289			
Percent in Pace	77.3%			
Number > 25 MPH	48			
Percent > 25 MPH	12.8%			

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th
		Total												Total	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
6:00	0	2	3	3	0	0	0	0	0	0	0	0	0	8	24
7:00	2	7	12	7	0	0	0	0	0	0	0	0	0	28	22
8:00	1	11	20	7	1	0	0	0	0	0	0	0	0	40	22
9:00	2	5	18	8	0	0	0	0	0	0	0	0	0	33	23
10:00	1	3	7	4	0	0	0	0	0	0	0	0	0	15	21
11:00	2	10	14	7	0	0	0	0	0	0	0	0	0	33	21
12:00 PM	0	4	15	3	0	0	0	0	0	0	0	0	0	22	22
1:00	1	4	15	0	0	0	0	0	0	0	0	0	0	20	22
2:00	0	8	21	13	0	0	0	0	0	0	0	0	0	42	22
3:00	1	5	27	7	1	0	0	0	0	0	0	0	0	41	23
4:00	1	3	27	15	0	0	0	0	0	0	0	0	0	46	23
5:00	3	8	32	1	0	0	0	0	0	0	0	0	0	44	22
6:00	5	12	15	4	2	0	0	0	0	0	0	0	0	38	21
7:00	0	9	17	5	1	0	0	0	0	0	0	0	0	32	23
8:00	0	4	6	1	0	0	0	0	0	0	0	0	0	11	21
9:00	0	4	5	0	0	0	0	0	0	0	0	0	0	9	22
10:00	4	0	5	1	0	0	0	0	0	0	0	0	0	10	20
11:00	0	2	3	2	0	0	0	0	0	0	0	0	0	7	22
Total	23	103	262	88	5	0	0	0	0	0	0	0	0	481	

Percentile Speed	15th	50th	85th	95th
	19	23	26	28

Mean Speed (Average) 21.8
 10 MPH Pace Speed 16-25
 Number in Pace 362
 Percent in Pace 75.3%
 Number > 25 MPH 93
 Percent > 25 MPH 19.3%

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 Engineering/Transportation Division
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th	
		Total												Total		
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2	22	26
1:00	1	0	0	1	0	0	0	0	0	0	0	0	0	2	21	26
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
5:00	0	0	2	2	0	0	0	0	0	0	0	0	0	4	23	29
6:00	1	0	2	2	1	0	0	0	0	0	0	0	0	6	24	27
7:00	1	1	13	7	0	0	0	0	0	0	0	0	0	22	22	26
8:00	0	4	28	6	0	0	0	0	0	0	0	0	0	38	21	25
9:00	1	8	9	8	0	0	0	0	0	0	0	0	0	26	23	28
10:00	0	8	6	6	0	0	0	0	0	0	0	0	0	20	22	25
11:00	2	12	6	4	0	0	0	0	0	0	0	0	0	24	21	26
12:00 PM	1	8	10	0	0	0	0	0	0	0	0	0	0	19	22	25
1:00	1	7	14	7	0	0	0	0	0	0	0	0	0	29	23	26
2:00	0	8	13	12	2	0	0	0	0	0	0	0	0	35	22	27
3:00	5	13	20	6	0	0	0	0	0	0	0	0	0	44	21	25
4:00	1	15	17	5	0	0	0	0	0	0	0	0	0	38	21	25
5:00	3	13	23	6	0	0	0	0	0	0	0	0	0	45	22	25
6:00	0	17	20	6	0	0	0	0	0	0	0	0	0	43	22	25
7:00	0	9	14	2	0	0	0	0	0	0	0	0	0	25	21	24
8:00	1	5	10	4	2	0	0	0	0	0	0	0	0	22	22	25
9:00	0	7	4	3	0	0	0	0	0	0	0	0	0	14	21	27
10:00	0	2	4	1	0	0	0	0	0	0	0	0	0	7	22	28
11:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3	24	27
Total	18	139	217	89	5	0	0	0	0	0	0	0	0	468		

Percentile Speed	15th	50th	85th	95th	
Mean Speed (Average)	21.5	18	22	26	29
10 MPH Pace Speed	15-24				
Number in Pace	352				
Percent in Pace	75.2%				
Number > 25 MPH	94				
Percent > 25 MPH	20.1%				

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH														Mean	85th
		> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total		
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	3	24	26
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	19	20
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
5:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	24	24
6:00	0	1	3	2	0	0	0	0	0	0	0	0	0	6	24	26
7:00	0	4	10	8	0	0	0	0	0	0	0	0	0	22	23	27
8:00	2	10	22	8	0	0	0	0	0	0	0	0	0	42	22	25
9:00	0	7	13	8	1	0	0	0	0	0	0	0	0	29	23	27
10:00	0	6	18	4	1	0	0	0	0	0	0	0	0	29	22	26
11:00	1	8	14	4	0	0	0	0	0	0	0	0	0	27	21	26
12:00 PM	0	11	21	4	1	1	0	0	0	0	0	0	0	38	22	26
1:00	2	7	29	7	2	0	0	0	0	0	0	0	0	47	23	27
2:00	3	11	21	10	1	1	0	0	0	0	0	0	0	47	23	26
3:00	2	11	28	8	1	0	0	0	0	0	0	0	0	50	22	25
4:00	0	10	24	6	0	0	0	0	0	0	0	0	0	40	22	26
5:00	2	15	23	4	2	0	0	0	0	0	0	0	0	46	22	25
6:00	1	11	16	4	1	0	0	0	0	0	0	0	0	33	22	25
7:00	2	8	16	1	0	0	0	0	0	0	0	0	0	27	21	25
8:00	0	5	8	2	0	0	0	0	0	0	0	0	0	15	22	25
9:00	0	1	12	4	0	0	0	0	0	0	0	0	0	17	23	27
10:00	1	2	6	3	0	0	0	0	0	0	0	0	0	12	22	26
11:00	1	2	2	0	0	0	0	0	0	0	0	0	0	5	21	24
Total	17	131	289	88	10	2	0	0	0	0	0	0	0	537		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	21.9			
10 MPH Pace Speed	15-24			
Number in Pace	414			
Percent in Pace	77.1%			
Number > 25 MPH	100			
Percent > 25 MPH	18.6%			

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th
		Total													
12:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4	20
1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19
2:00	2	1	0	0	0	0	0	0	0	0	0	0	0	3	15
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	15
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
5:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1	19
6:00	0	3	0	1	0	0	0	0	0	0	0	0	0	4	20
7:00	1	1	2	1	0	0	0	0	0	0	0	0	0	5	22
8:00	2	1	4	0	0	0	0	0	0	0	0	0	0	7	21
9:00	1	6	8	2	1	0	0	0	0	0	0	0	0	18	21
10:00	1	9	13	3	0	0	0	0	0	0	0	0	0	26	21
11:00	2	10	7	3	0	0	0	0	0	0	0	0	0	22	20
12:00 PM	0	8	13	11	0	0	0	0	0	0	0	0	0	32	23
1:00	1	11	12	1	1	0	0	0	0	0	0	0	0	26	20
2:00	1	3	13	6	0	0	0	0	0	0	0	0	0	23	22
3:00	0	6	9	1	0	0	0	0	0	0	0	0	0	16	22
4:00	0	5	16	5	0	0	0	0	0	0	0	0	0	26	23
5:00	0	4	9	4	0	0	0	0	0	0	0	0	0	17	22
6:00	4	9	7	4	0	0	0	0	0	0	0	0	0	24	20
7:00	1	6	7	1	0	0	0	0	0	0	0	0	0	15	21
8:00	0	1	11	6	0	0	0	0	0	0	0	0	0	18	22
9:00	1	3	2	5	0	0	0	0	0	0	0	0	0	11	22
10:00	2	2	6	1	1	0	0	0	0	0	0	0	0	12	21
11:00	0	5	2	0	1	0	0	0	0	0	0	0	0	8	22
Total	20	98	143	55	4	0	0	0	0	0	0	0	0	320	

Percentile Speed	15th	50th	85th	95th
	17	22	26	28

Mean Speed (Average) 21.1
 10 MPH Pace Speed 15-24
 Number in Pace 238
 Percent in Pace 74.4%
 Number > 25 MPH 59
 Percent > 25 MPH 18.4%

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th
		Total												Total	
12:00 AM	0	1	2	3	0	0	0	0	0	0	0	0	0	6	24
1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
3:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	20
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
6:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	22
7:00	0	1	3	0	0	0	0	0	0	0	0	0	0	4	23
8:00	0	2	6	1	1	0	0	0	0	0	0	0	0	10	23
9:00	0	3	6	5	0	0	0	0	0	0	0	0	0	14	23
10:00	3	7	10	3	1	0	0	0	0	0	0	0	0	24	22
11:00	0	7	9	5	0	0	0	0	0	0	0	0	0	21	23
12:00 PM	0	3	20	5	1	0	0	0	0	0	0	0	0	29	23
1:00	1	6	16	10	0	0	0	0	0	0	0	0	0	33	23
2:00	1	4	18	10	0	0	0	0	0	0	0	0	0	33	23
3:00	2	5	11	3	0	0	0	0	0	0	0	0	0	21	22
4:00	0	9	14	4	0	0	0	0	0	0	0	0	0	27	22
5:00	0	8	18	5	0	0	0	0	0	0	0	0	0	31	22
6:00	2	5	11	8	1	0	0	0	0	0	0	0	0	27	22
7:00	1	2	8	4	0	0	0	0	0	0	0	0	0	15	22
8:00	0	2	11	1	2	0	0	0	0	0	0	0	0	16	22
9:00	0	4	5	1	0	0	0	0	0	0	0	0	0	10	22
10:00	1	0	5	0	0	0	0	0	0	0	0	0	0	6	20
11:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	25
Total	11	70	176	68	6	0	0	0	0	0	0	0	0	331	

Percentile 15th 50th 85th 95th
 Speed 19 23 26 29

Mean Speed (Average) 22.2
 10 MPH Pace Speed 16-25
 Number in Pace 246
 Percent in Pace 74.3%
 Number > 25 MPH 74
 Percent > 25 MPH 22.4%

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Royal Rd, 1

Time	0 - 15 MPH	> 15 - MPH													Mean	85th
		> 20 - MPH	> 25 - MPH	> 30 - MPH	> 35 - MPH	> 40 - MPH	> 45 - MPH	> 50 - MPH	> 55 - MPH	> 60 - MPH	> 65 - MPH	> 70 MPH	Total			
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	3	24	27
1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21	21
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	25
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	21
6:00	0	1	3	3	0	0	0	0	0	0	0	0	0	7	25	28
7:00	0	2	4	5	0	0	0	0	0	0	0	0	0	11	23	28
8:00	2	10	25	11	3	0	0	0	0	0	0	0	0	51	22	26
9:00	1	5	17	5	0	0	0	0	0	0	0	0	0	28	23	26
10:00	1	5	9	6	0	0	0	0	0	0	0	0	0	21	23	26
11:00	2	10	16	2	0	0	0	0	0	0	0	0	0	30	22	27
12:00 PM	0	9	8	2	1	0	0	0	0	0	0	0	0	20	21	24
1:00	2	8	15	6	0	0	0	0	0	0	0	0	0	31	22	26
2:00	1	14	15	9	1	0	0	0	0	0	0	0	0	40	21	26
3:00	1	12	10	10	2	0	0	0	0	0	0	0	0	35	22	27
4:00	0	11	16	6	1	0	0	0	0	0	0	0	0	34	22	26
5:00	1	6	21	10	0	0	0	0	0	0	0	0	0	38	23	26
6:00	0	5	22	4	0	0	0	0	0	0	0	0	0	31	22	26
7:00	2	3	22	3	1	0	0	0	0	0	0	0	0	31	22	27
8:00	1	8	9	3	2	0	0	0	0	0	0	0	0	23	22	26
9:00	1	2	4	1	0	0	0	0	0	0	0	0	0	8	21	26
10:00	0	1	1	2	0	0	0	0	0	0	0	0	0	4	24	29
11:00	0	2	3	0	0	0	0	0	0	0	0	0	0	5	23	26
Total	15	114	223	89	11	0	0	0	0	0	0	0	0	452		
		Percentile Speed	15th	50th	85th	95th										
		Mean Speed (Average)	22.0													
		10 MPH Pace Speed	15-24													
		Number in Pace	333													
		Percent in Pace	73.7%													
		Number > 25 MPH	100													
		Percent > 25 MPH	22.1%													
Grand Total	138	762	1495	520	46	2	0	0	0	0	0	0	0	2963		
Stats		Percentile Speed	15th	50th	85th	95th										
		Mean Speed (Average)	21.7													
		10 MPH Pace Speed	15-24													
		Number in Pace	2488													
		Percent in Pace	75.0%													
		Number > 25 MPH	643													
		Percent > 25 MPH	19.4%													

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th	
		Total												Total		
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	19
1:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	19
2:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2	15	20
3:00	2	0	0	0	0	0	0	0	0	0	0	0	0	2	13	14
4:00	2	1	0	0	0	0	0	0	0	0	0	0	0	3	15	20
5:00	3	3	1	0	0	0	0	0	0	0	0	0	0	7	17	20
6:00	1	4	3	4	0	0	0	0	0	0	0	0	0	12	22	27
7:00	9	9	15	3	1	0	0	0	0	0	0	0	0	37	20	26
8:00	6	22	30	9	0	0	0	0	0	0	0	0	0	67	21	24
9:00	1	12	10	5	1	1	0	0	0	0	0	0	0	30	22	27
10:00	5	10	12	7	0	0	0	0	0	0	0	0	0	34	21	25
11:00	0	8	14	1	0	0	0	0	0	0	0	0	0	23	22	25
12:00 PM	2	5	6	9	0	0	0	0	0	0	0	0	0	22	23	27
1:00	2	6	20	2	0	0	0	0	0	0	0	0	0	30	22	24
2:00	2	11	12	8	1	0	0	0	0	0	0	0	0	34	23	28
3:00	0	18	23	9	0	0	0	0	0	0	0	0	0	50	22	26
4:00	0	13	15	4	0	0	0	0	0	0	0	0	0	32	22	25
5:00	1	17	27	9	0	0	0	0	0	0	0	0	0	54	22	25
6:00	3	15	22	4	1	0	0	0	0	0	0	0	0	45	21	24
7:00	0	6	8	4	1	0	0	0	0	0	0	0	0	19	22	25
8:00	1	5	6	3	0	0	0	0	0	0	0	0	0	15	21	26
9:00	0	3	6	3	0	0	0	0	0	0	0	0	0	12	23	26
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	24
11:00	1	1	2	1	0	0	0	0	0	0	0	0	0	5	21	26
Total	43	171	232	85	5	1	0	0	0	0	0	0	0	537		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	20.7			
10 MPH Pace Speed	15-24			
Number in Pace	399			
Percent in Pace	74.3%			
Number > 25 MPH	91			
Percent > 25 MPH	16.9%			

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - 20 MPH													Mean	85th
		> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total			
12:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	16	17
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3	21	23
5:00	0	2	4	0	0	0	0	0	0	0	0	0	0	6	21	24
6:00	0	1	3	2	0	0	0	0	0	0	0	0	0	6	24	26
7:00	4	10	24	8	0	0	0	0	0	0	0	0	0	46	22	26
8:00	9	28	27	12	1	0	0	0	0	0	0	0	0	77	22	26
9:00	0	4	20	12	0	0	0	0	0	0	0	0	0	36	23	27
10:00	5	7	15	1	0	0	0	0	0	0	0	0	0	28	21	25
11:00	4	11	18	4	1	0	0	0	0	0	0	0	0	38	21	26
12:00 PM	2	2	17	3	0	0	0	0	0	0	0	0	0	24	22	25
1:00	2	10	13	5	0	0	0	0	0	0	0	0	0	30	22	25
2:00	3	16	22	7	0	0	0	0	0	0	0	0	0	48	22	27
3:00	3	14	15	8	2	0	0	0	0	0	0	0	0	42	23	26
4:00	0	13	21	5	1	0	0	0	0	0	0	0	0	40	23	26
5:00	2	12	28	9	1	0	0	0	0	0	0	0	0	52	22	25
6:00	4	11	23	4	0	0	0	0	0	0	0	0	0	42	21	25
7:00	0	12	16	9	0	0	0	0	0	0	0	0	0	37	23	27
8:00	3	7	13	5	0	0	0	0	0	0	0	0	0	28	21	26
9:00	0	3	2	3	0	0	0	0	0	0	0	0	0	8	22	26
10:00	1	3	4	2	0	0	0	0	0	0	0	0	0	10	20	24
11:00	0	1	3	0	0	0	0	0	0	0	0	0	0	4	22	28
Total	43	169	289	99	6	0	0	0	0	0	0	0	0	606		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	21.0			
10 MPH Pace Speed	15-24			
Number in Pace	453			
Percent in Pace	74.8%			
Number > 25 MPH	105			
Percent > 25 MPH	17.3%			

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Mean	85th
		Total													
12:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	3	22
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	17
5:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2	23
6:00	0	2	4	1	1	0	0	0	0	0	0	0	0	8	24
7:00	8	13	24	4	2	0	0	0	0	0	0	0	0	51	22
8:00	13	37	46	10	1	0	0	0	0	0	0	0	0	107	21
9:00	2	3	17	13	2	0	0	0	0	0	0	0	0	37	23
10:00	3	6	23	2	0	0	0	0	0	0	0	0	0	34	22
11:00	1	12	12	3	1	0	0	0	0	0	0	0	0	29	21
12:00 PM	1	9	22	5	0	0	0	0	0	0	0	0	0	37	22
1:00	1	9	14	6	0	0	0	0	0	0	0	0	0	30	23
2:00	6	13	20	4	0	0	0	0	0	0	0	0	0	43	22
3:00	7	19	23	7	1	0	0	0	0	0	0	0	0	57	21
4:00	5	23	26	7	0	0	0	0	0	0	0	0	0	61	21
5:00	2	22	36	5	1	0	0	0	0	0	0	0	0	66	22
6:00	1	15	21	6	1	0	0	0	0	0	0	0	0	44	22
7:00	3	13	17	4	0	0	0	0	0	0	0	0	0	37	21
8:00	0	6	21	1	0	0	0	0	0	0	0	0	0	28	22
9:00	0	7	4	3	0	0	0	0	0	0	0	0	0	14	21
10:00	1	1	3	1	0	0	0	0	0	0	0	0	0	6	22
11:00	0	1	2	2	1	0	0	0	0	0	0	0	0	6	24
Total	55	212	338	85	11	0	0	0	0	0	0	0	0	701	

	Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	20.6	18	22	25	28
10 MPH Pace Speed	15-24				
Number in Pace	544				
Percent in Pace	77.6%				
Number > 25 MPH	96				
Percent > 25 MPH	13.7%				

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - MPH													Mean	85th
		> 20 - MPH	> 25 - MPH	> 30 - MPH	> 35 - MPH	> 40 - MPH	> 45 - MPH	> 50 - MPH	> 55 - MPH	> 60 - MPH	> 65 - MPH	> 70 MPH	Total			
12:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2	24	26
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	19	20
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2	18	21
5:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2	24	24
6:00	0	1	2	0	1	0	0	0	0	0	0	0	0	4	24	26
7:00	3	11	18	10	0	0	0	0	0	0	0	0	0	42	23	27
8:00	5	19	36	7	0	0	0	0	0	0	0	0	0	67	22	25
9:00	3	6	19	11	0	0	0	0	0	0	0	0	0	39	23	27
10:00	4	11	14	6	1	0	0	0	0	0	0	0	0	36	22	26
11:00	5	12	12	7	0	0	0	0	0	0	0	0	0	36	21	26
12:00 PM	4	13	11	7	1	0	0	0	0	0	0	0	0	36	22	26
1:00	5	11	20	13	1	0	0	0	0	0	0	0	0	50	23	27
2:00	2	16	24	12	1	0	0	0	0	0	0	0	0	55	23	26
3:00	5	12	22	3	1	0	0	0	0	0	0	0	0	43	22	25
4:00	3	8	27	8	0	0	0	0	0	0	0	0	0	46	22	26
5:00	3	20	25	7	1	0	0	0	0	0	0	0	0	56	22	25
6:00	3	12	23	4	0	0	0	0	0	0	0	0	0	42	22	25
7:00	3	15	15	7	0	0	0	0	0	0	0	0	0	40	21	25
8:00	0	9	12	0	1	0	0	0	0	0	0	0	0	22	22	25
9:00	0	5	6	3	0	0	0	0	0	0	0	0	0	14	23	27
10:00	1	1	7	1	0	0	0	0	0	0	0	0	0	10	22	26
11:00	0	3	5	1	0	0	0	0	0	0	0	0	0	9	21	24
Total	50	186	303	107	8	0	0	0	0	0	0	0	0	654		

Percentile
 Speed 15th 50th 85th 95th

Mean Speed (Average) 20.9
 10 MPH Pace Speed 15-24
 Number in Pace 483
 Percent in Pace 73.9%
 Number > 25 MPH 115
 Percent > 25 MPH 17.6%

Town of Brookline
 Engineering/Transportation Division
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - 20 MPH > 20 - 25 MPH > 25 - 30 MPH > 30 - 35 MPH > 35 - 40 MPH > 40 - 45 MPH > 45 - 50 MPH > 50 - 55 MPH > 55 - 60 MPH > 60 - 65 MPH > 65 - 70 MPH > 70 MPH													Mean	85th		
		Total	0	2	2	0	0	0	0	0	0	0	0	0	4	20	25	
12:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4	20	25
1:00	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	19	25
2:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	15	19
3:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	15	20
4:00	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	16	18
5:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	19	24
6:00	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	20	25
7:00	0	1	4	2	0	0	0	0	0	0	0	0	0	0	0	7	22	27
8:00	1	6	3	3	1	0	0	0	0	0	0	0	0	0	0	14	21	26
9:00	2	6	13	1	0	0	0	0	0	0	0	0	0	0	0	22	21	24
10:00	2	6	13	0	1	0	0	0	0	0	0	0	0	0	0	22	21	24
11:00	3	8	7	2	0	0	0	0	0	0	0	0	0	0	0	20	20	24
12:00 PM	0	7	19	3	0	0	0	0	0	0	0	0	0	0	0	29	23	27
1:00	5	7	10	1	0	0	0	0	0	0	0	0	0	0	0	23	20	23
2:00	3	13	15	3	0	0	0	0	0	0	0	0	0	0	0	34	22	26
3:00	1	5	8	5	1	0	0	0	0	0	0	0	0	0	0	20	22	26
4:00	0	8	21	3	0	0	0	0	0	0	0	0	0	0	0	32	23	25
5:00	0	10	12	2	1	0	0	0	0	0	0	0	0	0	0	25	22	26
6:00	7	12	15	3	1	0	0	0	0	0	0	0	0	0	0	38	20	25
7:00	0	14	13	2	0	0	0	0	0	0	0	0	0	0	0	29	21	25
8:00	2	8	13	3	0	0	0	0	0	0	0	0	0	0	0	26	22	26
9:00	1	6	9	3	0	0	0	0	0	0	0	0	0	0	0	19	22	27
10:00	0	5	7	2	0	0	0	0	0	0	0	0	0	0	0	14	21	26
11:00	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	6	22	24
Total	35	129	192	39	5	0	0	0	0	0	0	0	0	0	0	400		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	20.2			
10 MPH Pace Speed	15-24			
Number in Pace	317			
Percent in Pace	79.3%			
Number > 25 MPH	44			
Percent > 25 MPH	11.0%			

Town of Brookline
 Engineering/Transportation Division
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - MPH													Mean	85th
		> 20 - MPH	> 25 - MPH	> 30 - MPH	> 35 - MPH	> 40 - MPH	> 45 - MPH	> 50 - MPH	> 55 - MPH	> 60 - MPH	> 65 - MPH	> 70 MPH	Total			
12:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	4	24	26
1:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	21	23
2:00	0	1	2	1	1	0	0	0	0	0	0	0	0	5	24	32
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	20	22
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	19	19
6:00	0	1	1	1	0	0	0	0	0	0	0	0	0	3	22	27
7:00	0	1	3	0	1	0	0	0	0	0	0	0	0	5	23	25
8:00	1	1	6	4	0	0	0	0	0	0	0	0	0	12	23	27
9:00	2	5	11	5	0	0	0	0	0	0	0	0	0	23	23	26
10:00	0	5	10	5	0	0	0	0	0	0	0	0	0	20	22	26
11:00	1	5	13	6	0	0	0	0	0	0	0	0	0	25	23	27
12:00 PM	1	9	11	14	0	0	0	0	0	0	0	0	0	35	23	27
1:00	1	5	24	5	0	0	0	0	0	0	0	0	0	35	23	26
2:00	0	12	22	8	0	0	0	0	0	0	0	0	0	42	23	26
3:00	2	14	18	7	0	0	0	0	0	0	0	0	0	41	22	26
4:00	1	9	16	5	0	0	0	0	0	0	0	0	0	31	22	26
5:00	1	11	14	7	0	0	0	0	0	0	0	0	0	33	22	26
6:00	0	10	12	4	1	0	0	0	0	0	0	0	0	27	22	26
7:00	2	5	12	2	0	0	0	0	0	0	0	0	0	21	22	26
8:00	1	10	6	2	0	0	0	0	0	0	0	0	0	19	22	25
9:00	0	2	8	1	0	0	0	0	0	0	0	0	0	11	22	25
10:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4	20	22
11:00	0	0	1	1	0	0	0	0	0	0	0	0	0	3	25	33
Total	13	113	196	78	4	0	0	0	0	0	0	0	0	404		

Percentile Speed	15th	50th	85th	95th
Mean Speed (Average)	21.7			
10 MPH Pace Speed	15-24			
Number in Pace	305			
Percent in Pace	75.5%			
Number > 25 MPH	82			
Percent > 25 MPH	20.3%			

Town of Brookline
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA
 Direction: WB to Welland Rd, 2

Time	0 - 15 MPH	> 15 - MPH													Mean	85th
		> 20 - MPH	> 25 - MPH	> 30 - MPH	> 35 - MPH	> 40 - MPH	> 45 - MPH	> 50 - MPH	> 55 - MPH	> 60 - MPH	> 65 - MPH	> 70 MPH	Total			
12:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	24	27
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21
2:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2	24	25
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	1	2	1	0	0	0	0	0	0	0	0	0	0	4	18	21
6:00	0	0	3	2	0	0	0	0	0	0	0	0	0	5	25	28
7:00	1	7	17	9	0	0	0	0	0	0	0	0	0	34	23	28
8:00	2	26	40	9	0	0	0	0	0	0	0	0	0	77	22	26
9:00	0	7	20	4	0	0	0	0	0	0	0	0	0	31	23	26
10:00	2	3	18	2	0	0	0	0	0	0	0	0	0	25	23	26
11:00	3	7	10	9	0	0	0	0	0	0	0	0	0	29	22	27
12:00 PM	2	18	15	3	0	0	0	0	0	0	0	0	0	38	21	24
1:00	1	9	18	6	0	0	0	0	0	0	0	0	0	34	22	26
2:00	7	16	15	3	0	0	0	0	0	0	0	0	0	41	21	26
3:00	2	20	28	11	1	0	0	0	0	0	0	0	0	62	22	27
4:00	5	12	15	6	0	0	0	0	0	0	0	0	0	38	22	26
5:00	0	10	25	6	1	0	0	0	0	0	0	0	0	42	23	26
6:00	3	17	18	7	2	0	0	0	0	0	0	0	0	47	22	26
7:00	3	6	13	7	1	0	0	0	0	0	0	0	0	30	22	27
8:00	1	9	12	2	1	0	0	0	0	0	0	0	0	25	22	26
9:00	1	2	1	1	0	0	0	0	0	0	0	0	0	5	21	26
10:00	0	1	5	0	1	0	0	0	0	0	0	0	0	7	24	29
11:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2	23	26
Total	34	172	277	90	7	0	0	0	0	0	0	0	0	580		
		Percentile Speed	15th	50th	85th	95th										
		Mean Speed (Average)	21.1													
		10 MPH Pace Speed	15-24													
		Number in Pace	444													
		Percent in Pace	76.6%													
		Number > 25 MPH	97													
		Percent > 25 MPH	16.7%													
Grand Total	273	1152	1827	583	46	1	0	0	0	0	0	0	0	3882		
Stats		Percentile Speed	15th	50th	85th	95th										
		Mean Speed (Average)	20.9													
		10 MPH Pace Speed	15-24													
		Number in Pace	3350													
		Percent in Pace	76.3%													
		Number > 25 MPH	700													
		Percent > 25 MPH	15.9%													

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	0	0	0
12:15	0	0	0
12:30	0	0	0
12:45	2	0	2
1:00	0	1	1
1:15	0	0	0
1:30	0	1	1
1:45	0	0	0
2:00	0	0	0
2:15	0	1	1
2:30	2	0	2
2:45	1	1	2
3:00	0	2	2
3:15	2	0	2
3:30	0	0	0
3:45	0	0	0
4:00	1	1	2
4:15	0	0	0
4:30	0	0	0
4:45	0	2	2
5:00	0	0	0
5:15	0	2	2
5:30	1	3	4
5:45	0	2	2
6:00	1	0	1
6:15	2	2	4
6:30	0	7	7
6:45	2	3	5
7:00	5	7	12
7:15	11	15	26
7:30	7	6	13
7:45	12	9	21
8:00	17	22	39
8:15	8	32	40
8:30	3	6	9
8:45	4	7	11
9:00	5	5	10
9:15	5	10	15
9:30	3	5	8
9:45	6	10	16
10:00	5	5	10
10:15	7	7	14
10:30	8	13	21
10:45	3	9	12
11:00	1	6	7
11:15	2	7	9
11:30	1	7	8
11:45	3	3	6
Total	130	219	349
Peak	7:15	7:30	7:30
Volume	47	69	113
Peak Factor	0.691	0.539	0.706

Town of Brookline
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	6	3	9
12:15	3	6	9
12:30	5	7	12
12:45	8	6	14
1:00	2	10	12
1:15	7	6	13
1:30	4	8	12
1:45	5	6	11
2:00	7	8	15
2:15	6	9	15
2:30	7	6	13
2:45	10	11	21
3:00	8	14	22
3:15	7	11	18
3:30	4	13	17
3:45	3	12	15
4:00	8	8	16
4:15	6	12	18
4:30	8	7	15
4:45	12	5	17
5:00	11	13	24
5:15	15	17	32
5:30	8	12	20
5:45	12	12	24
6:00	9	8	17
6:15	5	17	22
6:30	10	10	20
6:45	5	10	15
7:00	5	8	13
7:15	2	4	6
7:30	5	7	12
7:45	6	0	6
8:00	4	5	9
8:15	2	4	6
8:30	2	1	3
8:45	2	5	7
9:00	2	6	8
9:15	2	5	7
9:30	1	1	2
9:45	3	0	3
10:00	2	0	2
10:15	0	0	0
10:30	0	0	0
10:45	0	0	0
11:00	1	2	3
11:15	1	1	2
11:30	2	1	3
11:45	1	1	2
Total	244	318	562
Peak	4:30	5:00	5:00
Volume	46	54	100
Peak Factor	0.767	0.794	0.781

Town of Brookline
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	2	1	3
12:15	0	0	0
12:30	0	0	0
12:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	1	1
4:15	0	1	1
4:30	0	0	0
4:45	0	1	1
5:00	0	1	1
5:15	0	1	1
5:30	0	2	2
5:45	0	2	2
6:00	1	1	2
6:15	2	0	2
6:30	4	3	7
6:45	1	2	3
7:00	4	5	9
7:15	7	12	19
7:30	7	16	23
7:45	10	13	23
8:00	18	17	35
8:15	11	22	33
8:30	6	21	27
8:45	5	17	22
9:00	5	11	16
9:15	11	8	19
9:30	5	9	14
9:45	12	8	20
10:00	2	6	8
10:15	3	4	7
10:30	6	9	15
10:45	4	9	13
11:00	5	12	17
11:15	9	6	15
11:30	12	7	19
11:45	7	13	20
Total	159	241	400
Peak Volume	7:30	8:00	7:45
Peak Factor	46	77	118
	0.639	0.875	0.843

Town of Brookline
 Engineering/Transportation Division
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Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	5	4	9
12:15	5	6	11
12:30	7	7	14
12:45	5	7	12
1:00	7	9	16
1:15	5	4	9
1:30	4	9	13
1:45	4	8	12
2:00	11	8	19
2:15	14	9	23
2:30	8	18	26
2:45	9	13	22
3:00	9	7	16
3:15	6	15	21
3:30	16	12	28
3:45	10	8	18
4:00	13	8	21
4:15	11	13	24
4:30	10	10	20
4:45	12	9	21
5:00	8	12	20
5:15	15	12	27
5:30	10	17	27
5:45	11	11	22
6:00	11	12	23
6:15	8	8	16
6:30	11	13	24
6:45	8	9	17
7:00	6	6	12
7:15	9	13	22
7:30	10	8	18
7:45	7	10	17
8:00	2	9	11
8:15	4	9	13
8:30	2	5	7
8:45	3	5	8
9:00	3	5	8
9:15	4	0	4
9:30	2	2	4
9:45	0	1	1
10:00	4	4	8
10:15	1	3	4
10:30	1	2	3
10:45	4	1	5
11:00	3	2	5
11:15	3	1	4
11:30	0	0	0
11:45	1	1	2
Total	322	365	687
Peak	3:30	2:30	5:15
Volume	50	53	99
Peak Factor	0.781	0.736	0.917

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	1	2	3
12:15	1	1	2
12:30	0	0	0
12:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	1	0	1
1:45	1	0	1
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	1	1
4:30	0	0	0
4:45	0	0	0
5:00	1	0	1
5:15	1	0	1
5:30	0	1	1
5:45	2	1	3
6:00	0	0	0
6:15	2	3	5
6:30	1	3	4
6:45	3	2	5
7:00	5	5	10
7:15	5	11	16
7:30	7	19	26
7:45	5	16	21
8:00	15	19	34
8:15	13	44	57
8:30	6	31	37
8:45	4	13	17
9:00	5	8	13
9:15	10	13	23
9:30	5	13	18
9:45	6	3	9
10:00	2	10	12
10:15	3	6	9
10:30	9	10	19
10:45	6	8	14
11:00	3	2	5
11:15	10	13	23
11:30	3	5	8
11:45	8	9	17
Total	144	272	416
Peak	7:30	7:45	7:45
Volume	40	110	149
Peak Factor	0.667	0.625	0.654

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

3/2/2023	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
Time			
12:00 PM	5	11	16
12:15	5	12	17
12:30	3	8	11
12:45	6	6	12
1:00	7	5	12
1:15	7	9	16
1:30	10	9	19
1:45	5	7	12
2:00	9	14	23
2:15	8	6	14
2:30	11	11	22
2:45	7	12	19
3:00	10	18	28
3:15	14	16	30
3:30	8	11	19
3:45	12	12	24
4:00	4	18	22
4:15	16	16	32
4:30	7	14	21
4:45	11	13	24
5:00	13	14	27
5:15	8	21	29
5:30	11	9	20
5:45	13	22	35
6:00	15	16	31
6:15	8	11	19
6:30	11	10	21
6:45	9	7	16
7:00	12	12	24
7:15	2	8	10
7:30	6	11	17
7:45	5	6	11
8:00	7	9	16
8:15	5	7	12
8:30	9	4	13
8:45	1	8	9
9:00	6	4	10
9:15	4	3	7
9:30	1	3	4
9:45	3	4	7
10:00	3	2	5
10:15	1	3	4
10:30	1	0	1
10:45	2	1	3
11:00	0	2	2
11:15	1	1	2
11:30	1	3	4
11:45	1	0	1
Total	324	429	753
Peak	4:15	5:15	5:15
Volume	47	68	115
Peak Factor	0.734	0.773	0.821

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	2	0	2
12:15	1	0	1
12:30	0	1	1
12:45	0	1	1
1:00	0	0	0
1:15	0	1	1
1:30	0	0	0
1:45	1	0	1
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	1	1
4:30	0	1	1
4:45	0	0	0
5:00	1	1	2
5:15	0	1	1
5:30	0	0	0
5:45	0	0	0
6:00	1	0	1
6:15	2	1	3
6:30	1	2	3
6:45	2	1	3
7:00	6	5	11
7:15	5	12	17
7:30	3	15	18
7:45	8	10	18
8:00	13	20	33
8:15	11	20	31
8:30	10	24	34
8:45	8	3	11
9:00	9	9	18
9:15	0	5	5
9:30	11	12	23
9:45	9	13	22
10:00	5	9	14
10:15	9	8	17
10:30	9	12	21
10:45	6	7	13
11:00	4	10	14
11:15	8	6	14
11:30	6	11	17
11:45	9	9	18
Total	160	231	391
Peak	7:45	7:45	7:45
Volume	42	74	116
Peak Factor	0.808	0.771	0.853

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	10	6	16
12:15	11	12	23
12:30	13	10	23
12:45	4	8	12
1:00	11	11	22
1:15	13	14	27
1:30	10	14	24
1:45	13	11	24
2:00	6	19	25
2:15	15	8	23
2:30	12	13	25
2:45	14	15	29
3:00	14	12	26
3:15	13	16	29
3:30	11	9	20
3:45	12	6	18
4:00	9	12	21
4:15	6	9	15
4:30	14	14	28
4:45	11	11	22
5:00	9	13	22
5:15	9	13	22
5:30	11	22	33
5:45	17	8	25
6:00	6	9	15
6:15	14	9	23
6:30	8	13	21
6:45	5	11	16
7:00	6	8	14
7:15	9	10	19
7:30	6	12	18
7:45	6	10	16
8:00	3	8	11
8:15	4	6	10
8:30	5	3	8
8:45	3	5	8
9:00	5	3	8
9:15	4	5	9
9:30	4	5	9
9:45	4	1	5
10:00	6	3	9
10:15	2	3	5
10:30	2	1	3
10:45	2	3	5
11:00	2	3	5
11:15	0	3	3
11:30	1	2	3
11:45	2	1	3
Total	377	423	800
Peak	2:15	4:45	2:30
Volume	55	59	109
Peak Factor	0.917	0.670	0.940

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	0	2	2
12:15	1	1	2
12:30	1	0	1
12:45	2	1	3
1:00	0	0	0
1:15	1	2	3
1:30	0	1	1
1:45	0	0	0
2:00	0	2	2
2:15	2	1	3
2:30	0	0	0
2:45	1	0	1
3:00	0	1	1
3:15	0	2	2
3:30	1	0	1
3:45	0	0	0
4:00	0	1	1
4:15	0	1	1
4:30	0	0	0
4:45	0	1	1
5:00	1	0	1
5:15	0	1	1
5:30	0	0	0
5:45	0	0	0
6:00	1	0	1
6:15	0	0	0
6:30	1	2	3
6:45	2	1	3
7:00	1	2	3
7:15	1	2	3
7:30	2	2	4
7:45	1	1	2
8:00	1	4	5
8:15	2	4	6
8:30	2	2	4
8:45	2	4	6
9:00	4	6	10
9:15	3	5	8
9:30	6	7	13
9:45	5	4	9
10:00	9	5	14
10:15	6	6	12
10:30	5	4	9
10:45	6	7	13
11:00	5	4	9
11:15	8	5	13
11:30	5	3	8
11:45	4	8	12
Total	92	105	197
Peak	9:30	8:45	9:30
Volume	26	22	48
Peak Factor	0.722	0.786	0.857

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

3/4/2023	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
Time			
12:00 PM	7	4	11
12:15	10	6	16
12:30	9	8	17
12:45	6	11	17
1:00	3	5	8
1:15	10	7	17
1:30	8	8	16
1:45	5	3	8
2:00	9	5	14
2:15	2	11	13
2:30	8	6	14
2:45	4	12	16
3:00	2	6	8
3:15	4	6	10
3:30	4	4	8
3:45	6	4	10
4:00	6	6	12
4:15	6	6	12
4:30	8	6	14
4:45	6	14	20
5:00	4	3	7
5:15	4	5	9
5:30	4	5	9
5:45	5	12	17
6:00	6	14	20
6:15	7	10	17
6:30	5	6	11
6:45	6	8	14
7:00	0	11	11
7:15	2	6	8
7:30	7	7	14
7:45	6	5	11
8:00	4	2	6
8:15	4	15	19
8:30	5	3	8
8:45	5	6	11
9:00	1	3	4
9:15	7	5	12
9:30	2	6	8
9:45	1	5	6
10:00	5	5	10
10:15	3	6	9
10:30	3	1	4
10:45	1	2	3
11:00	2	2	4
11:15	3	0	3
11:30	3	2	5
11:45	0	2	2
Total	228	295	523
Peak Volume	12:00 PM	5:45	5:45
Peak Factor	0.800	0.750	0.813

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	3	2	5
12:15	0	1	1
12:30	2	0	2
12:45	1	1	2
1:00	0	0	0
1:15	0	0	0
1:30	0	1	1
1:45	1	1	2
2:00	0	1	1
2:15	0	1	1
2:30	0	2	2
2:45	0	1	1
3:00	0	0	0
3:15	0	1	1
3:30	1	1	2
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	1	1
5:30	0	0	0
5:45	0	0	0
6:00	0	0	0
6:15	0	0	0
6:30	1	0	1
6:45	0	3	3
7:00	0	1	1
7:15	2	0	2
7:30	1	2	3
7:45	1	2	3
8:00	4	1	5
8:15	1	0	1
8:30	3	6	9
8:45	2	5	7
9:00	2	6	8
9:15	4	5	9
9:30	4	6	10
9:45	4	6	10
10:00	3	4	7
10:15	6	6	12
10:30	6	5	11
10:45	9	5	14
11:00	6	5	11
11:15	5	9	14
11:30	7	4	11
11:45	3	7	10
Total	82	102	184
Peak Volume	10:15	11:00	10:30
Peak Factor	27	25	50
	0.750	0.694	0.893

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	4	15	19
12:15	7	8	15
12:30	9	5	14
12:45	9	7	16
1:00	9	10	19
1:15	8	5	13
1:30	10	11	21
1:45	6	9	15
2:00	13	10	23
2:15	9	9	18
2:30	5	8	13
2:45	6	15	21
3:00	5	15	20
3:15	3	4	7
3:30	9	12	21
3:45	4	10	14
4:00	5	10	15
4:15	7	3	10
4:30	5	12	17
4:45	10	6	16
5:00	8	6	14
5:15	7	9	16
5:30	7	9	16
5:45	9	9	18
6:00	11	9	20
6:15	6	4	10
6:30	6	6	12
6:45	4	8	12
7:00	6	6	12
7:15	3	5	8
7:30	4	7	11
7:45	2	3	5
8:00	3	7	10
8:15	4	4	8
8:30	2	6	8
8:45	7	2	9
9:00	1	3	4
9:15	2	2	4
9:30	5	3	8
9:45	2	3	5
10:00	4	1	5
10:15	1	2	3
10:30	0	1	1
10:45	1	0	1
11:00	1	2	3
11:15	0	0	0
11:30	0	0	0
11:45	0	1	1
Total	249	302	551
Peak	1:30	2:15	1:30
Volume	38	47	77
Peak Factor	0.731	0.783	0.837

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 AM	1	0	1
12:15	0	1	1
12:30	1	1	2
12:45	1	0	1
1:00	0	0	0
1:15	1	0	1
1:30	0	0	0
1:45	0	0	0
2:00	0	1	1
2:15	0	1	1
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	2	2
5:15	0	0	0
5:30	0	2	2
5:45	0	0	0
6:00	1	1	2
6:15	2	0	2
6:30	3	1	4
6:45	1	3	4
7:00	1	3	4
7:15	4	8	12
7:30	3	10	13
7:45	3	13	16
8:00	13	16	29
8:15	19	19	38
8:30	9	25	34
8:45	10	17	27
9:00	7	8	15
9:15	7	10	17
9:30	5	10	15
9:45	9	3	12
10:00	5	6	11
10:15	5	3	8
10:30	2	8	10
10:45	9	8	17
11:00	9	9	18
11:15	9	6	15
11:30	6	8	14
11:45	6	6	12
Total	152	209	361
Peak Volume	51	77	128
Peak Factor	0.671	0.770	0.842

Town of Brookline
 Engineering/Transportation Division
 333 Washington St, Brookline MA, 02445



Gardner Rd
 West of Winthrop Rd
 Brookline, MA

Time	WB to Royal Rd, 1	WB to Welland Rd, 2	Total
12:00 PM	5	8	13
12:15	4	11	15
12:30	7	8	15
12:45	4	11	15
1:00	11	7	18
1:15	11	9	20
1:30	3	9	12
1:45	6	9	15
2:00	13	10	23
2:15	9	9	18
2:30	10	7	17
2:45	8	15	23
3:00	9	16	25
3:15	11	18	29
3:30	8	14	22
3:45	7	14	21
4:00	8	13	21
4:15	11	9	20
4:30	9	8	17
4:45	6	8	14
5:00	9	7	16
5:15	6	12	18
5:30	13	9	22
5:45	10	14	24
6:00	7	12	19
6:15	6	17	23
6:30	10	11	21
6:45	8	7	15
7:00	9	9	18
7:15	10	5	15
7:30	6	9	15
7:45	6	7	13
8:00	2	6	8
8:15	10	4	14
8:30	8	6	14
8:45	3	9	12
9:00	3	2	5
9:15	3	0	3
9:30	1	3	4
9:45	1	0	1
10:00	0	5	5
10:15	1	0	1
10:30	1	1	2
10:45	2	1	3
11:00	1	1	2
11:15	3	0	3
11:30	1	1	2
11:45	0	0	0
Total	300	371	671
Peak Volume	40	63	99
Peak Factor	0.769	0.875	0.853
Grand Total AADT	2963	3882	6845
	AADT: 1,169	AADT: 1,169	

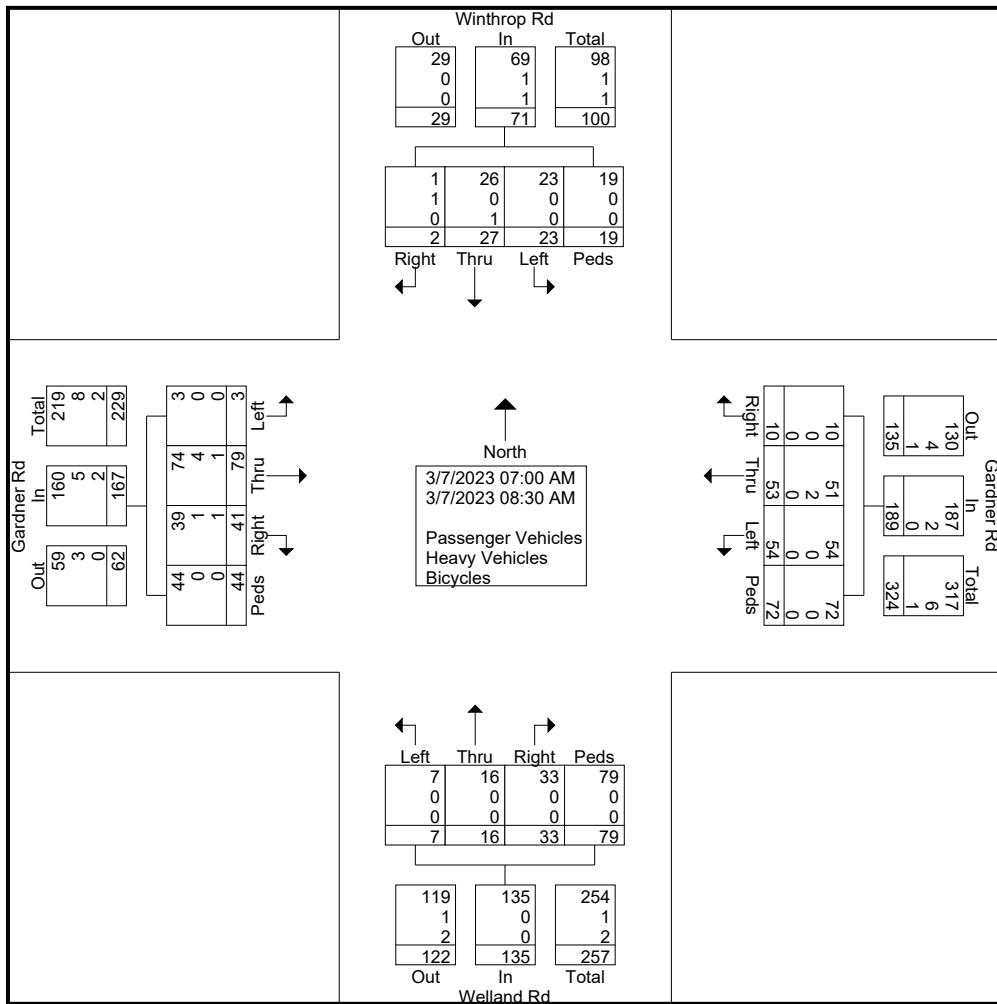
Town of Brookline

Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

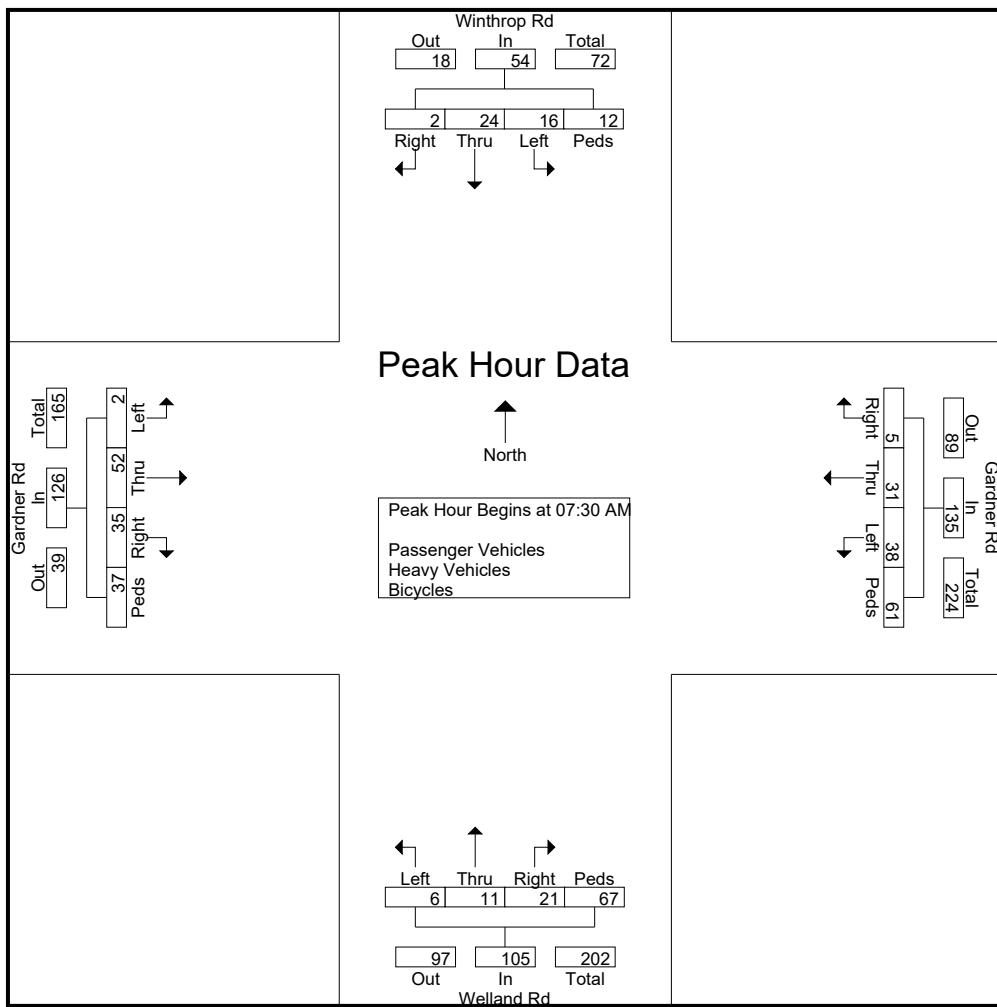


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	7	4	2	13	1	4	5	15	25	2	0	2	16	20	7	10	0	5	22	80
07:45 AM	1	10	5	16		1	13													1	
08:00 AM	0	5	4	5	14	1	9	17	24	51	8	7	3	30	48	12	6	1	20	39	152
08:15 AM	1	2	3	5	11	2	5	8	14	29	11					20	0	11	38	102	
Total Volume	2	24	16	12	54	5	31	38	61	135	21	11	6	67	105	35	52	2	37	126	420
% App. Total	3.7	44.4	29.6	22.2		3.7	23	28.1	45.2		20	10.5	5.7	63.8		27.8	41.3	1.6	29.4		
PHF	.500	.600	.800	.600	.844	.625	.596	.559	.635	.662	.477	.393	.500	.558	.547	.729	.650	.500	.463	.808	.691

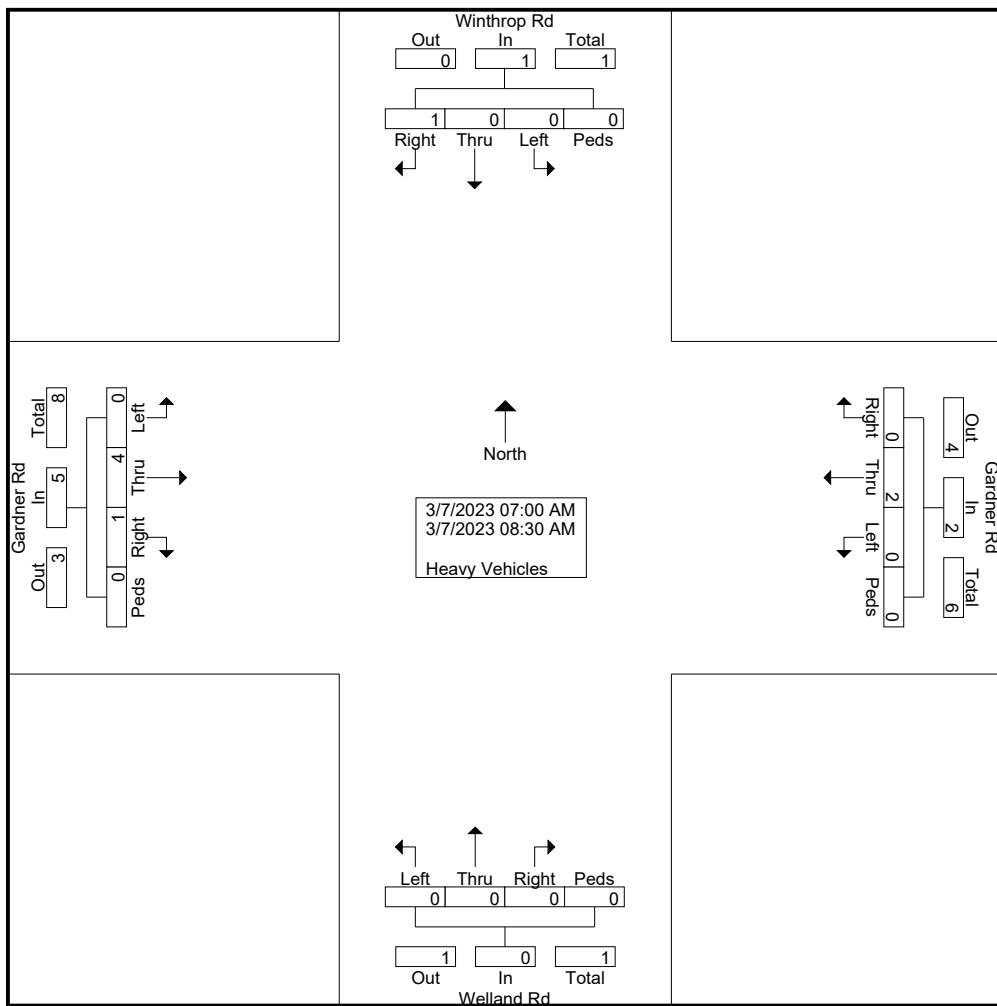


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***																					
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	4
*** BREAK ***																					
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	1	4	0	0	5	8
Apprch %	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	20	80	0	0	0	
Total %	12.5	0	0	0	12.5	0	25	0	0	25	0	0	0	0	0	12.5	50	0	0	62.5	

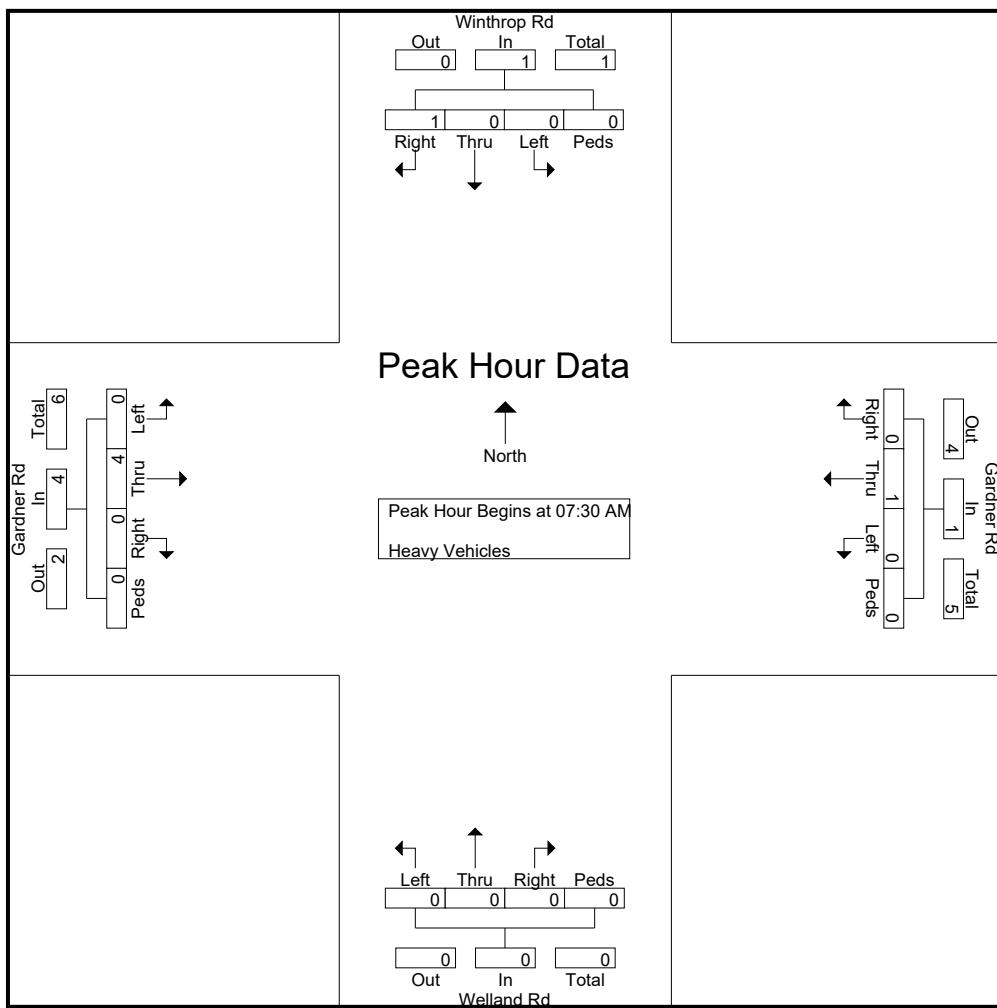


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
Total Volume	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	6
% App. Total	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	100	0	0	0	0
PHF	.250	.000	.000	.000	.250	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.500

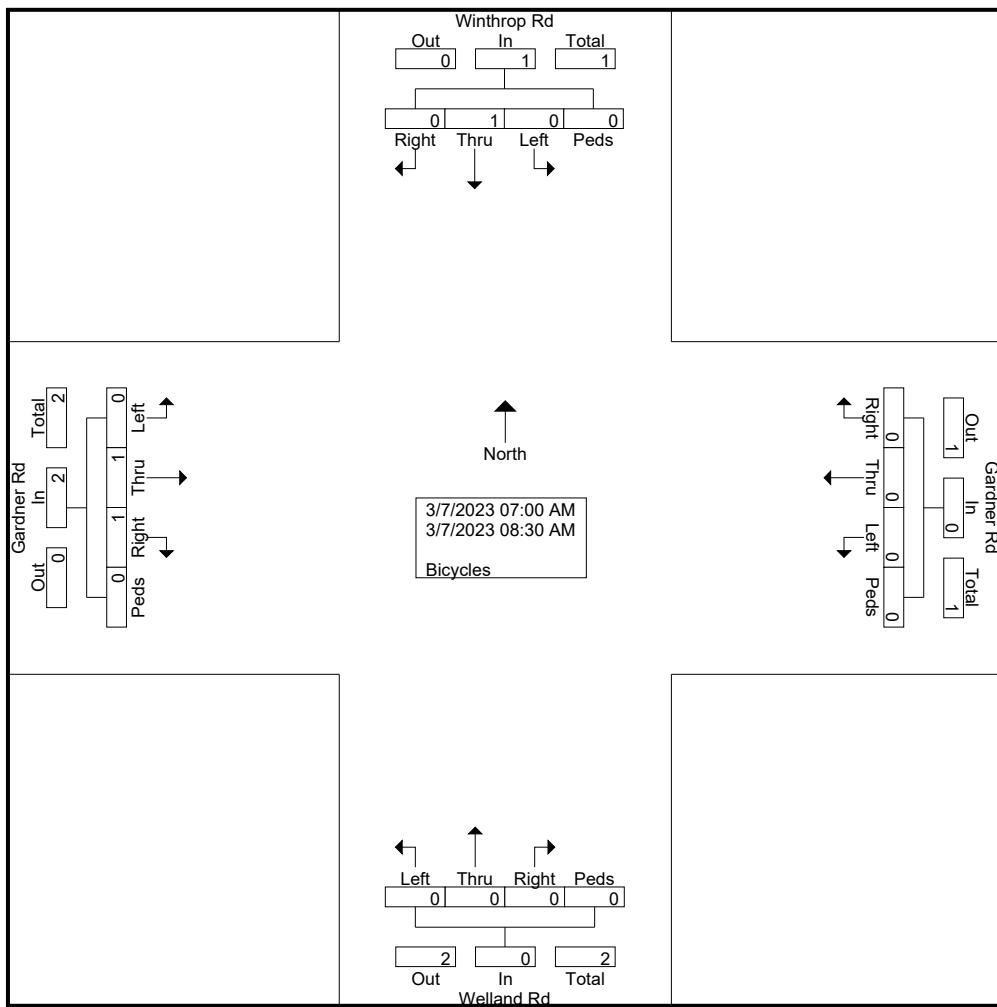


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
*** BREAK ***																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
*** BREAK ***																					
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
Apprch %	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	3
Total %	0	33.3	0	0	33.3	0	0	0	0	0	0	0	0	0	0	0	33.3	33.3	0	0	66.7

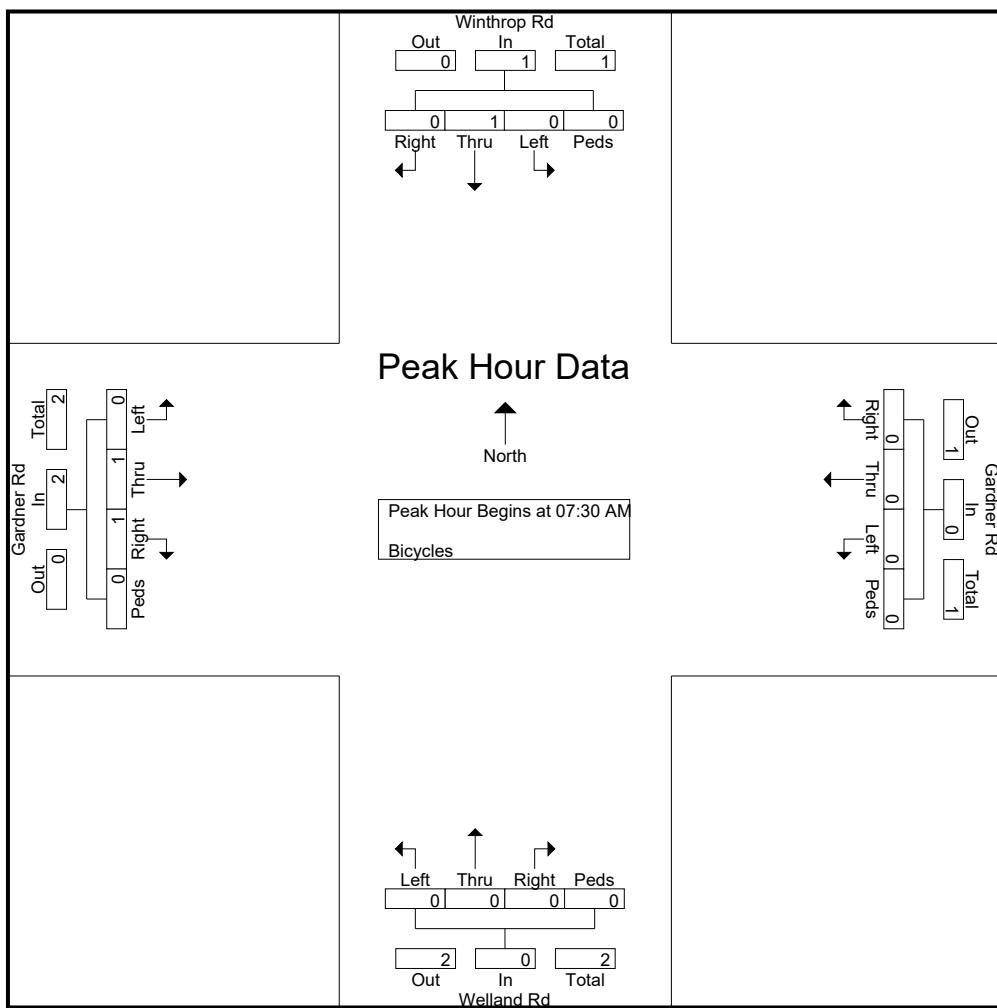


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd
at Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland AM 3-7-2023
Site Code : 00000001
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	3	
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.750	



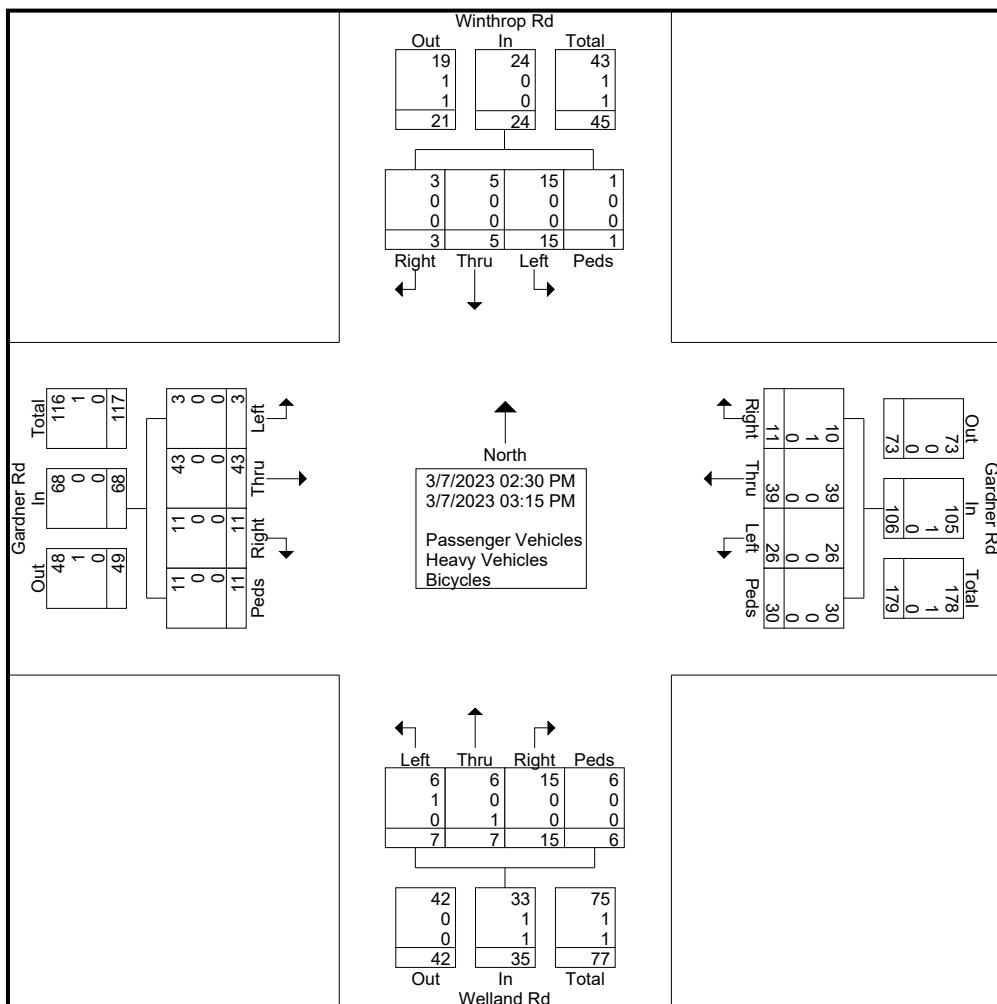
2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

Start Time	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
02:30 PM	0	0	2	0	2	3	8	6	2	19	2	2	2	4	10	2	8	2	1	13	44
02:45 PM	3	1	5	0	9	3	9	10	7	29	6	1	2	0	9	5	10	0	2	17	64
Total	3	1	7	0	11	6	17	16	9	48	8	3	4	4	19	7	18	2	3	30	108
03:00 PM	0	2	4	1	7	3	13	4	18	38	4	1	1	0	6	2	20	0	6	28	79
03:15 PM	0	2	4	0	6	2	9	6	3	20	3	3	2	2	10	2	5	1	2	10	46
Grand Total	3	5	15	1	24	11	39	26	30	106	15	7	7	6	35	11	43	3	11	68	233
Apprch %	12.5	20.8	62.5	4.2		10.4	36.8	24.5	28.3		42.9	20	20	17.1		16.2	63.2	4.4	16.2		
Total %	1.3	2.1	6.4	0.4	10.3	4.7	16.7	11.2	12.9	45.5	6.4	3	3	2.6	15	4.7	18.5	1.3	4.7	29.2	
Passenger Vehicles % Passenger Vehicles	100	100	100	100	100	90.9	100	100	100	99.1	100	85.7	85.7	100	94.3	100	100	100	100	100	98.7
Heavy Vehicles % Heavy Vehicles	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2
Bicycles % Bicycles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0.9
	0	0	0	0	0	0	0	0	0	0	0	0	14.3	0	2.9	0	0	0	0	0	1
	0	0	0	0	0	0	0	0	0	0	0	0	14.3	0	2.9	0	0	0	0	0	0.4

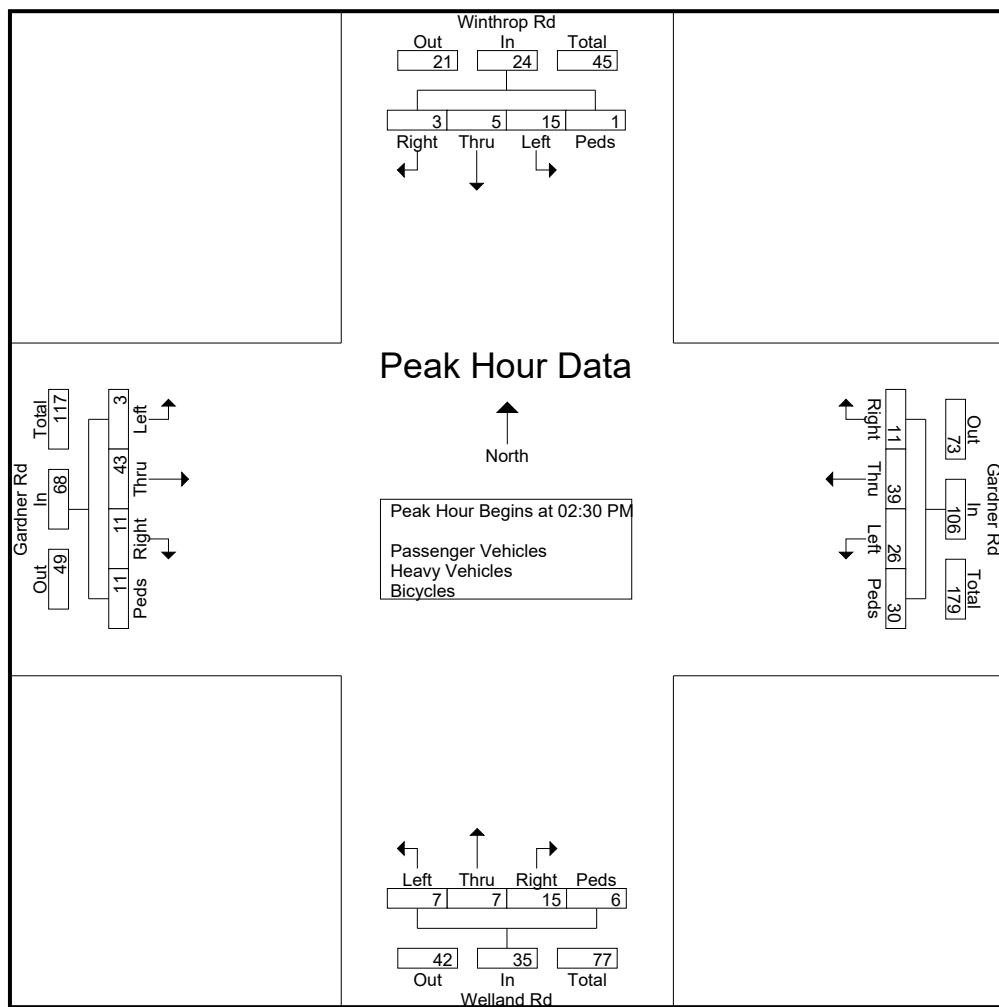


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:30 PM																					
02:30 PM	0	0	2	0	2	3	8	6	2	19	2	2	2	4	10	2	8	2			
02:45 PM	3	1	5	0	9	3	9	10	7	29	6	1	2	0	9	5	10	0	2	17	64
03:00 PM	0	2	4	1	7	3	13	4	18	38	4	1	1	0	6	2	20	0	6	28	79
03:15 PM	0	2	4	0	6	2	9	6	3	20	3	3									
Total Volume	3	5	15	1	24	11	39	26	30	106	15	7	7	6	35	11	43	3	11	68	233
% App. Total	12.5	20.8	62.5	4.2		10.4	36.8	24.5	28.3		42.9	20	20	17.1		16.2	63.2	4.4	16.2		
PHF	.250	.625	.750	.250	.667	.917	.750	.650	.417	.697	.625	.583	.875	.375	.875	.550	.538	.375	.458	.607	.737

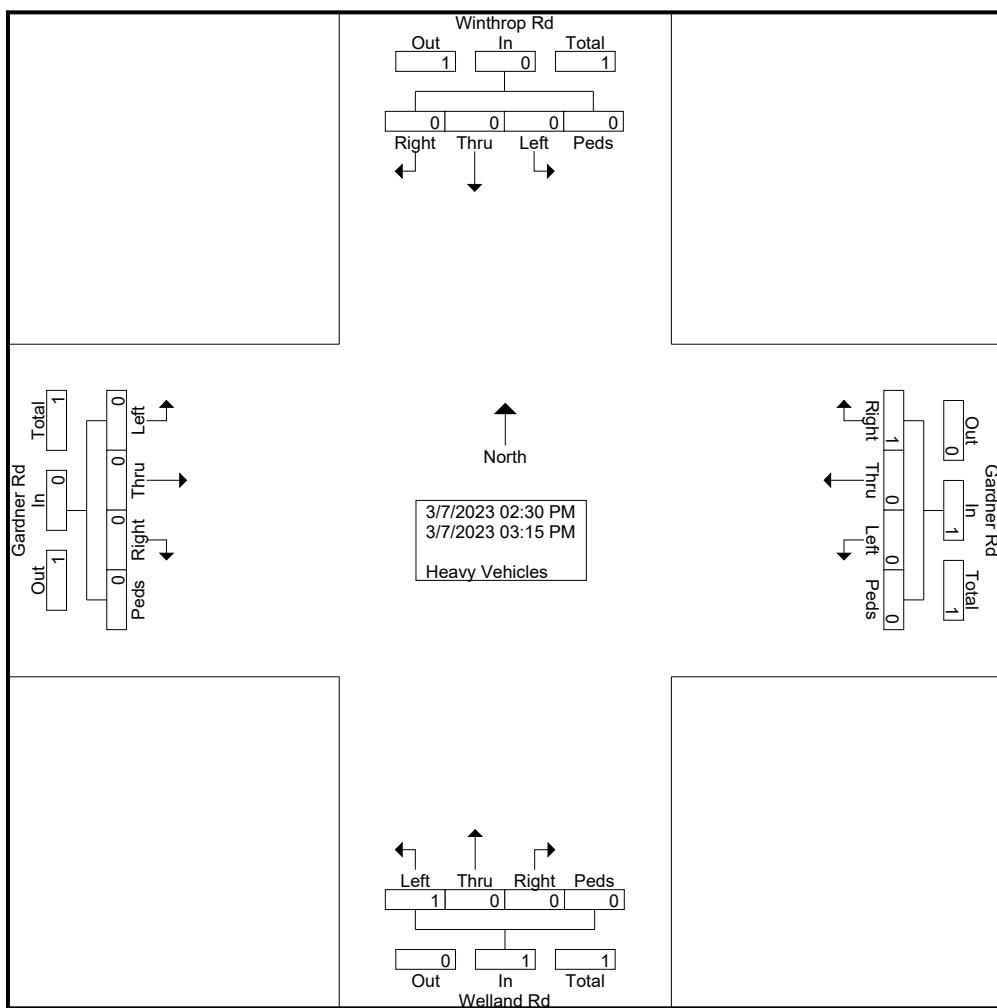


2.
Town of Brookline
 Engineering/Transportation Division

Gardner Rd at
 Winthrop Rd and Welland Rd
 Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
 Site Code : 00000003
 Start Date : 3/7/2023
 Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
02:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2
Apprch %	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	50	0	0	0	50	0	0	50	0	50	0	0	0	0	0	0

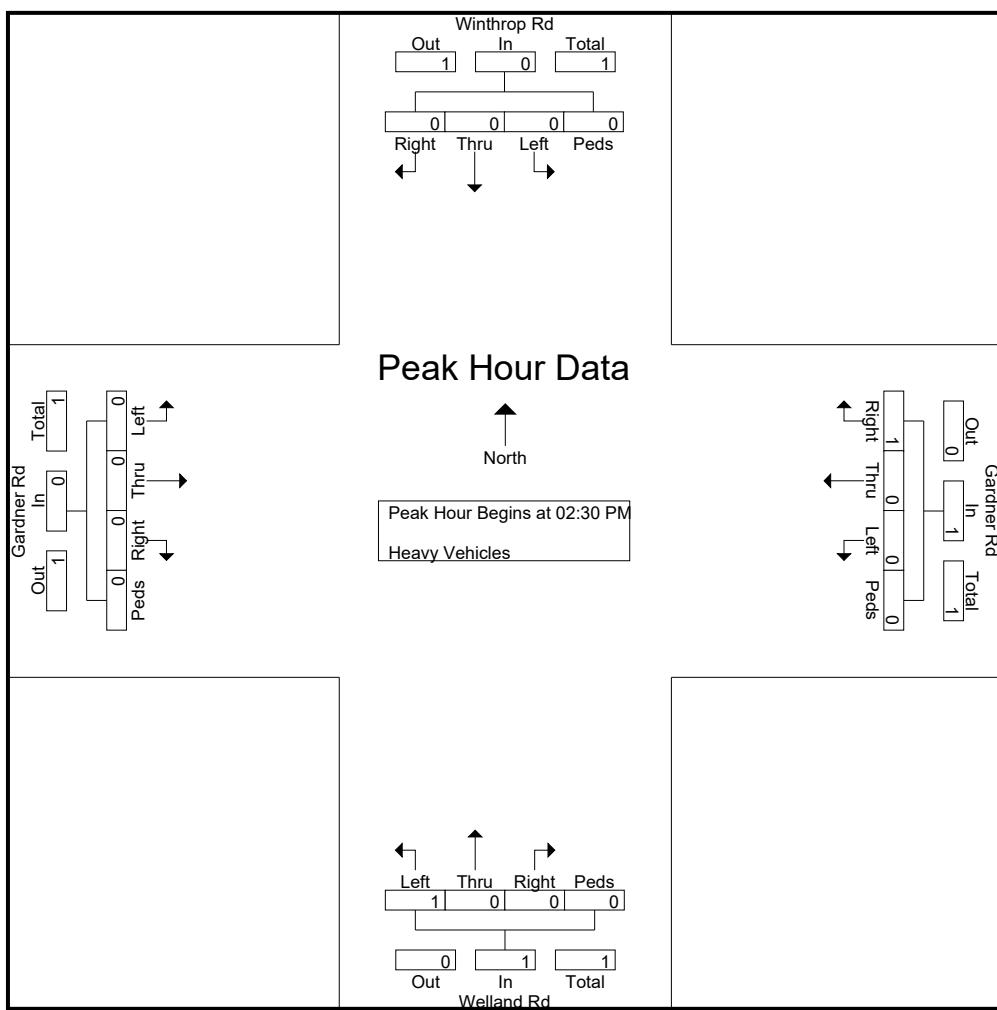


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:30 PM																					
02:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2
% App. Total	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500

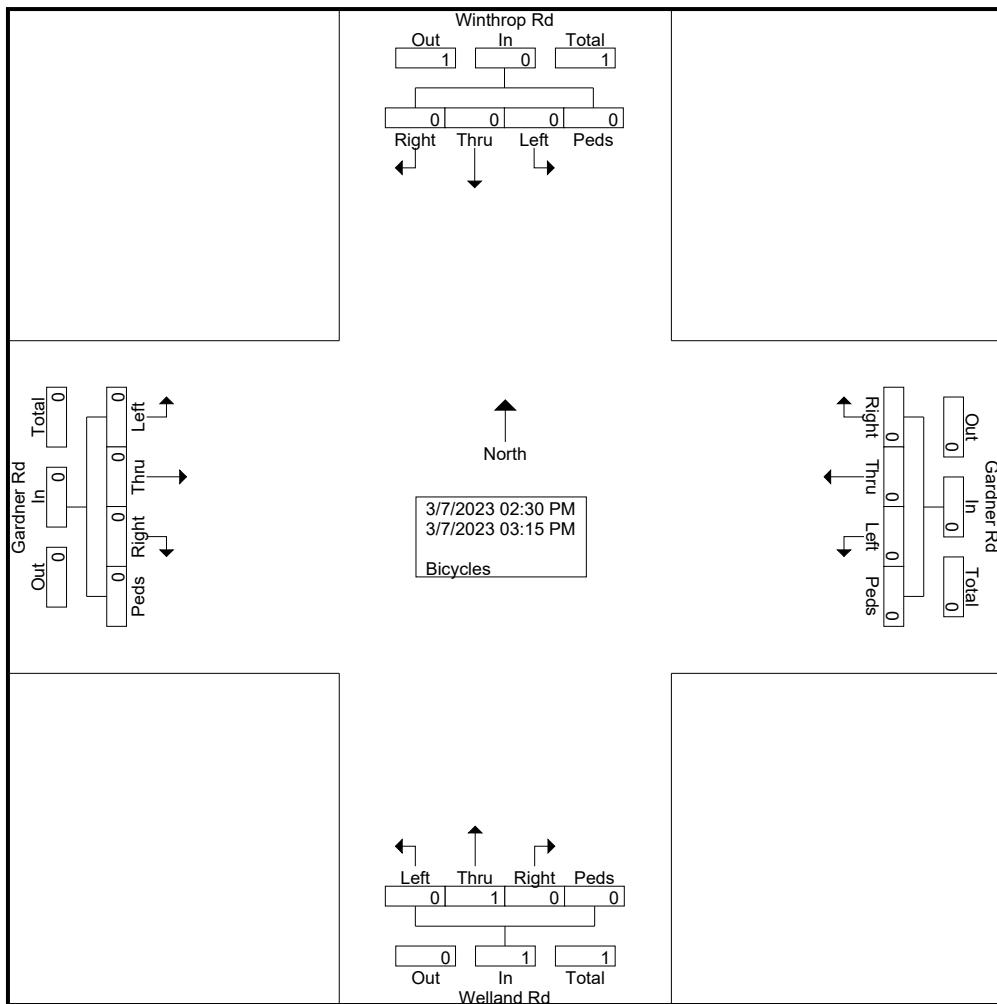


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
*** BREAK ***																					
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Apprch %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0

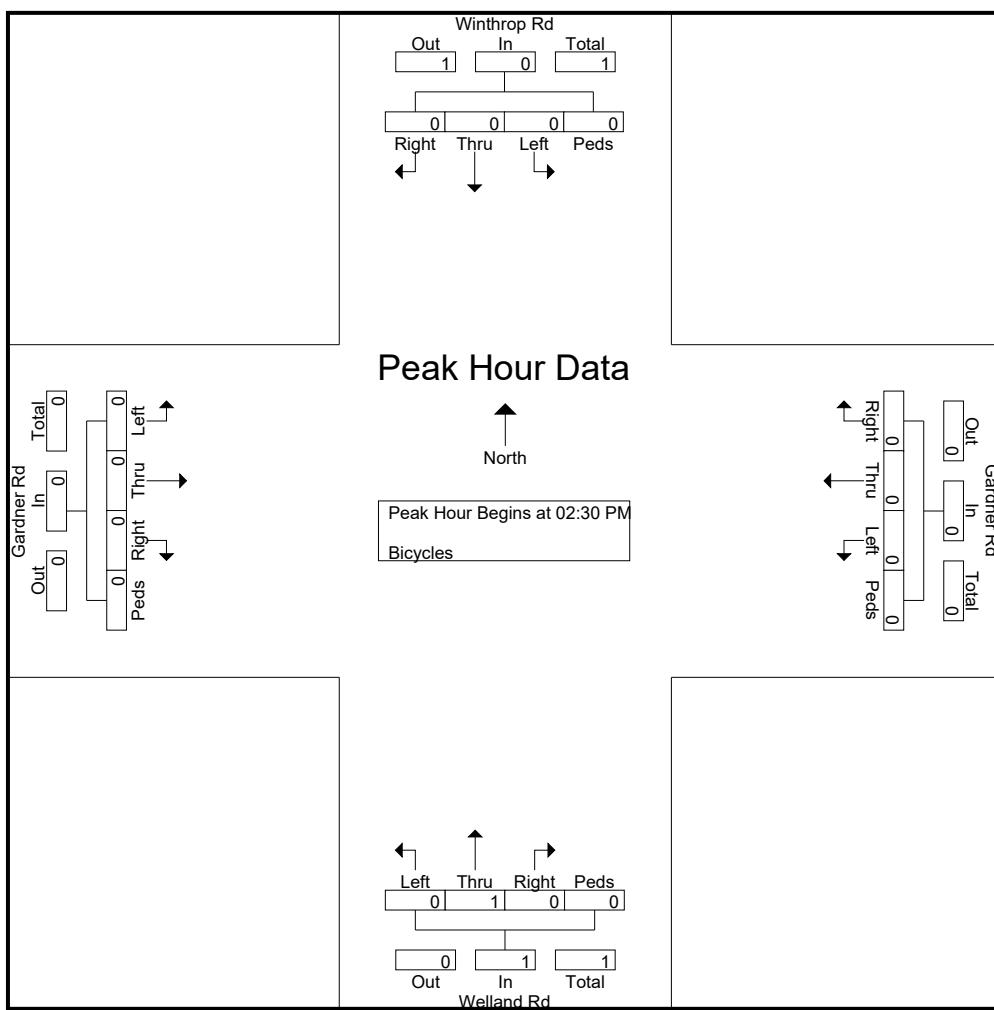


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland MID 3-7-2023
Site Code : 00000003
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:30 PM																					
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250



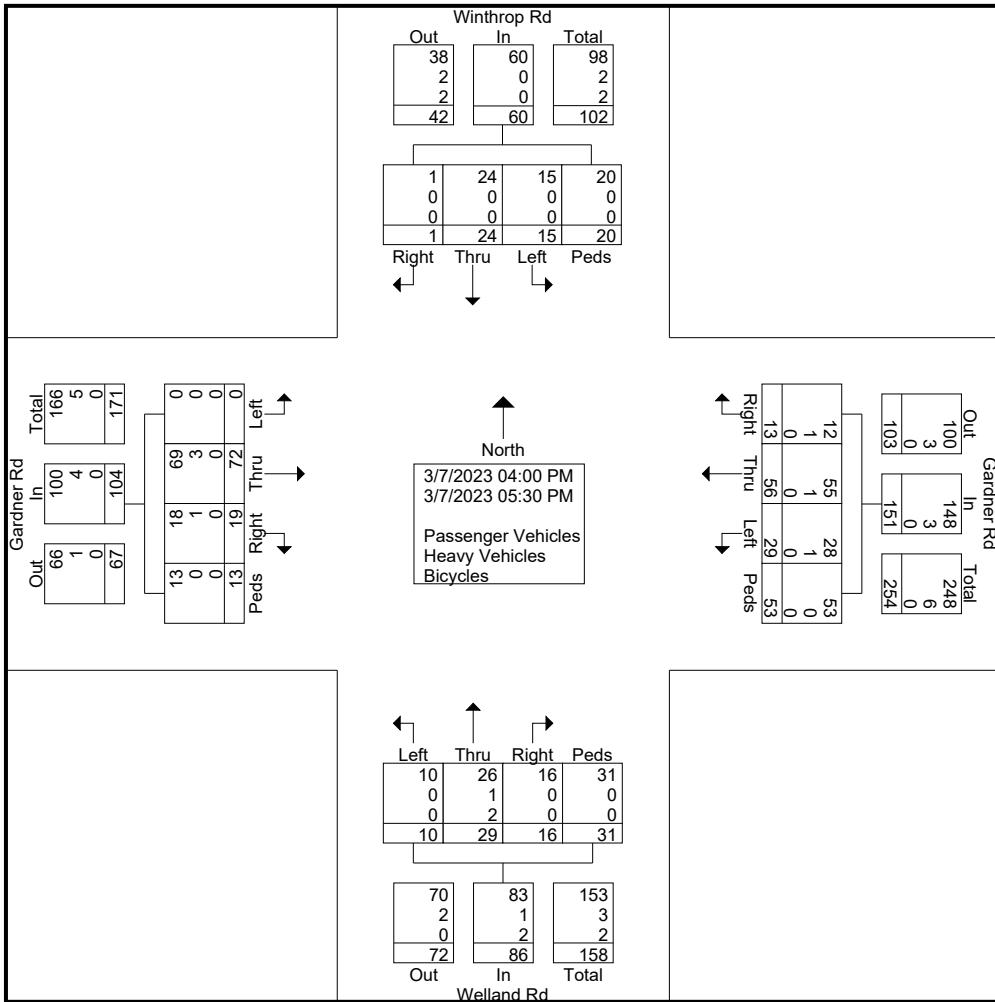
2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland PM 3-7-2023
Site Code : 00000004
Start Date : 3/7/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

Start Time	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	3	3	0	6	2	7	1	13	23	5	7	2	4	18	3	12	0	2	17	64
04:15 PM	0	5	2	4	11	3	5	7	10	25	4	3	1	7	15	4	8	0	0	12	63
04:30 PM	0	1	4	1	6	3	6	0	5	14	1	2	1	4	8	1	5	0	0	6	34
04:45 PM	0	3	1	3	7	1	10	4	3	18	2	5	0	0	7	1	10	0	1	12	44
Total	0	12	10	8	30	9	28	12	31	80	12	17	4	15	48	9	35	0	3	47	205
05:00 PM	1	5	2	8	16	0	10	6	6	22	1	4	4	5	14	4	13	0	5	22	74
05:15 PM	0	4	0	1	5	4	10	5	8	27	2	3	1	6	12	1	12	0	4	17	61
05:30 PM	0	3	3	3	9	0	8	6	8	22	1	5	1	5	12	5	12	0	1	18	61
Grand Total	1	24	15	20	60	13	56	29	53	151	16	29	10	31	86	19	72	0	13	104	401
Apprch %	1.7	40	25	33.3		8.6	37.1	19.2	35.1		18.6	33.7	11.6	36		18.3	69.2	0	12.5		
Total %	0.2	6	3.7	5	15	3.2	14	7.2	13.2	37.7	4	7.2	2.5	7.7	21.4	4.7	18	0	3.2	25.9	
Passenger Vehicles	100	100	100	100	100	92.3	98.2	96.6	100	98	100	89.7	100	100	96.5	94.7	95.8	0	100	96.2	97.5
% Passenger Vehicles	0	0	0	0	0	1	1	1	0	3	0	1	0	0	1	1	3	0	0	4	8
Heavy Vehicles	0	0	0	0	0	7.7	1.8	3.4	0	2	0	3.4	0	0	1.2	5.3	4.2	0	0	0	3.8
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	6.9	0	0	2.3	0	0	0	0	0	

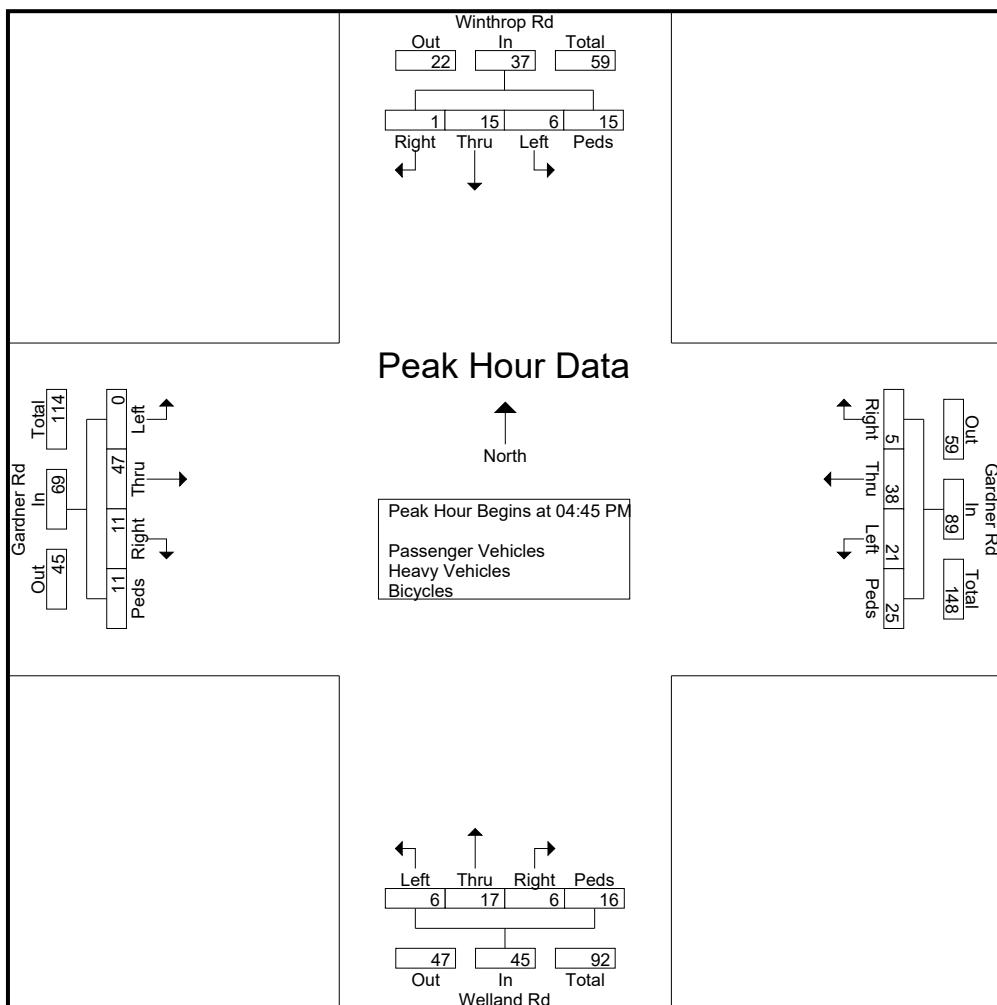


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland PM 3-7-2023
Site Code : 00000004
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North				Gardner Rd From East				Welland Rd From South				Gardner Rd From West								
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	3	1	3	7	1	10			2	5										
05:00 PM	1	5	2	8	16	0	10	6	6	22	1	4	4	5	14	4	13	0	5	22	74
05:15 PM	0	4	0	1	5	4	10	5	8	27	2	3	1	6							
05:30 PM	0	3	3	3	9	0	8	6	8	22	1	5	1	5	12	5	12	0	1	18	61
Total Volume	1	15	6	15	37	5	38	21	25	89	6	17	6	16	45	11	47	0	11	69	240
% App. Total	2.7	40.5	16.2	40.5		5.6	42.7	23.6	28.1		13.3	37.8	13.3	35.6		15.9	68.1	0	15.9		
PHF	.250	.750	.500	.469	.578	.313	.950	.875	.781	.824	.750	.850	.375	.667	.804	.550	.904	.000	.550	.784	.811

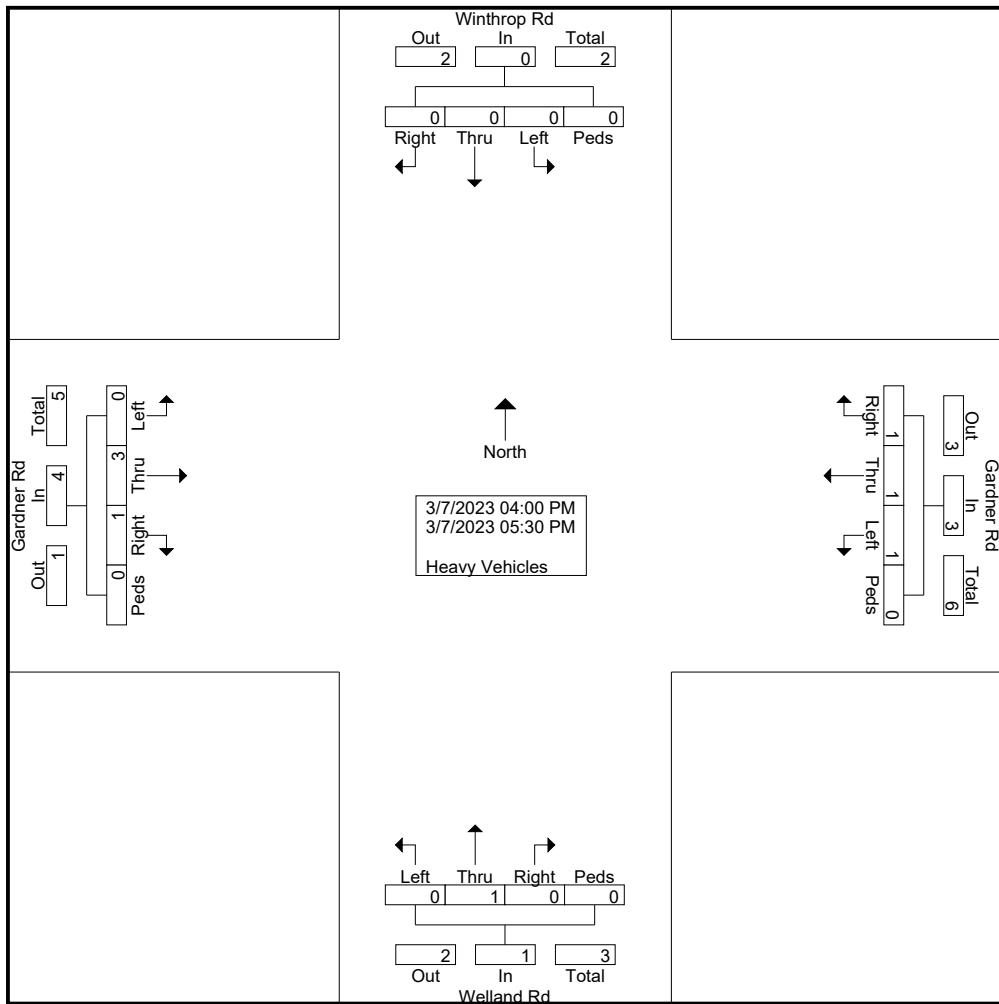


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland PM 3-7-2023
Site Code : 00000004
Start Date : 3/7/2023
Page No : 1

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
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*** BREAK ***																					
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Apprch %	0	0	0	0	0	33.3	33.3	33.3	0	0	0	100	0	0	0	25	75	0	0	0	0
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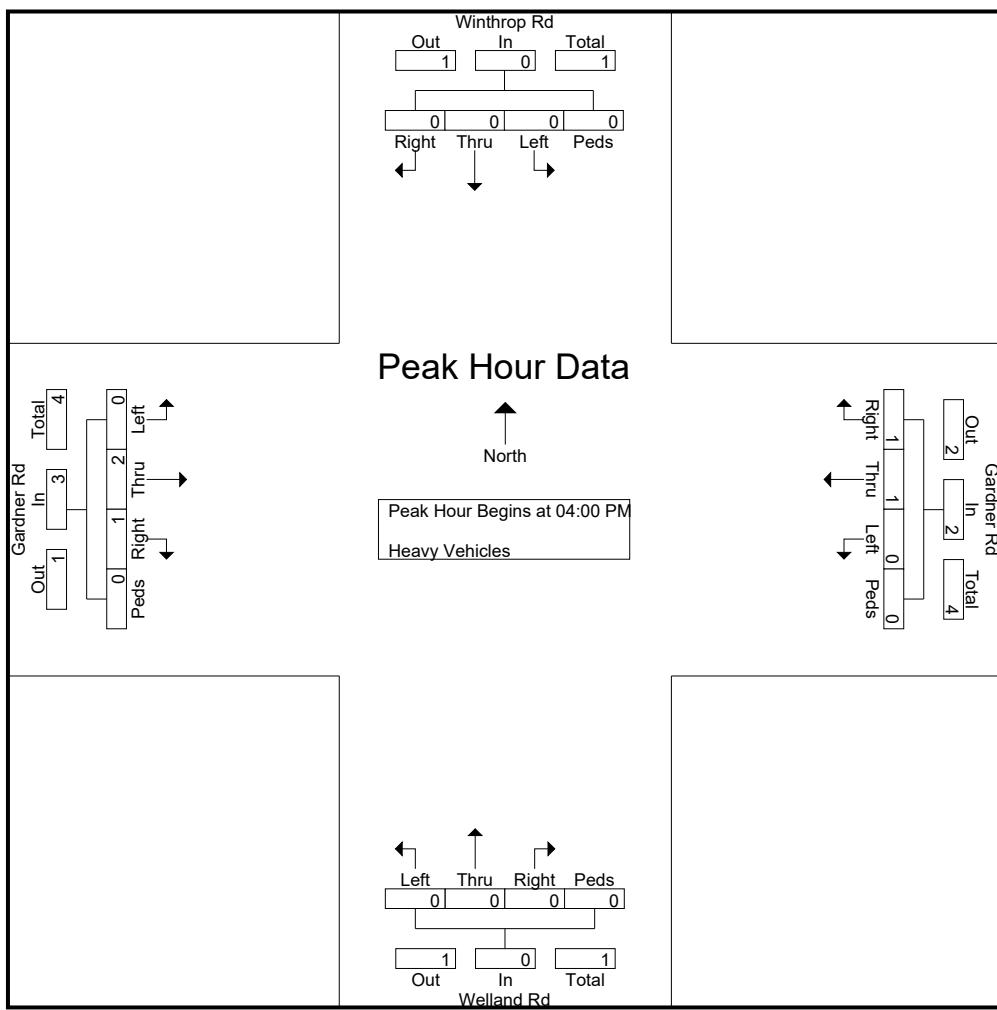


2.
Town of Brookline
Engineering/Transportation Division

Gardner Rd at
Winthrop Rd and Welland Rd
Brookline, MA

File Name : Gardner @ Winthrop @ welland PM 3-7-2023
Site Code : 00000004
Start Date : 3/7/2023
Page No : 2

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
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04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
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Total Volume	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	1	2	0	0	3	5
% App. Total	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	33.3	66.7	0	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.250	.000	.000	.500	.000	.000	.000	.000	.000	.250	.500	.000	.000	.375	.625



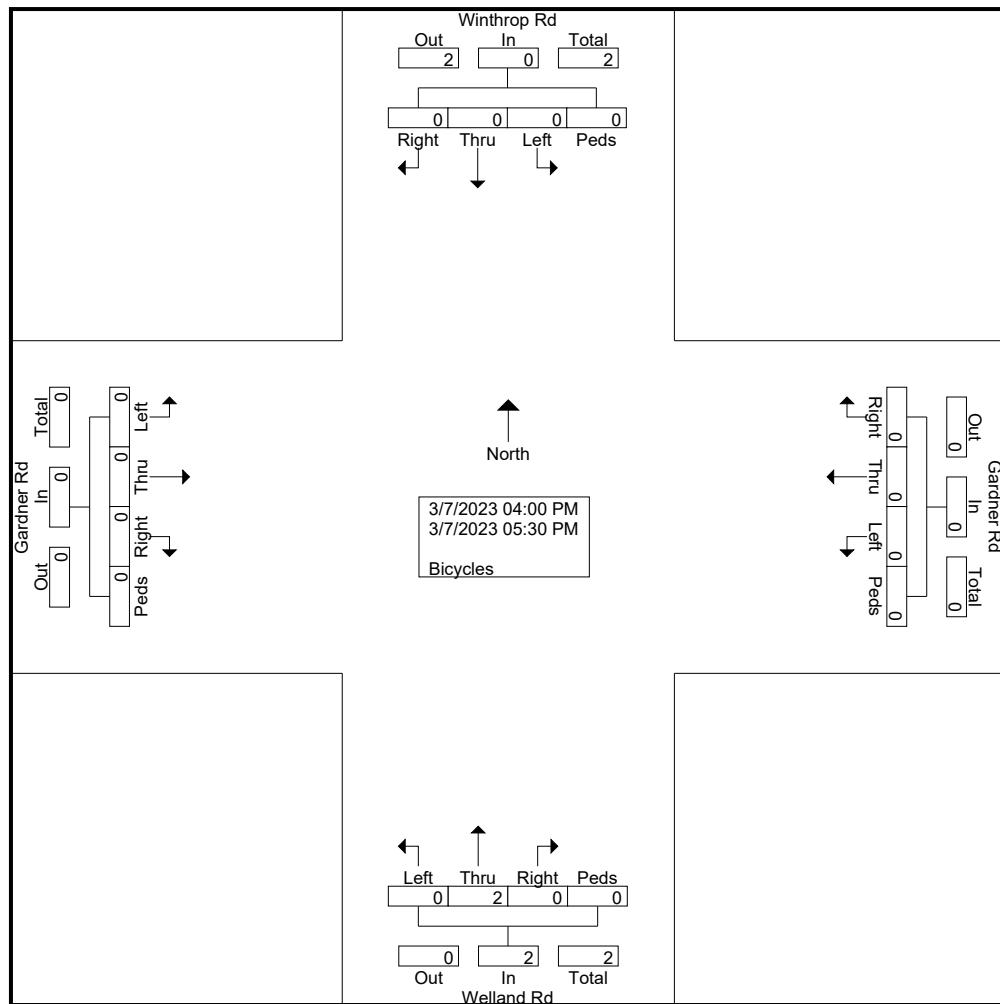
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Groups Printed- Bicycles

	Winthrop Rd From North					Gardner Rd From East					Welland Rd From South					Gardner Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
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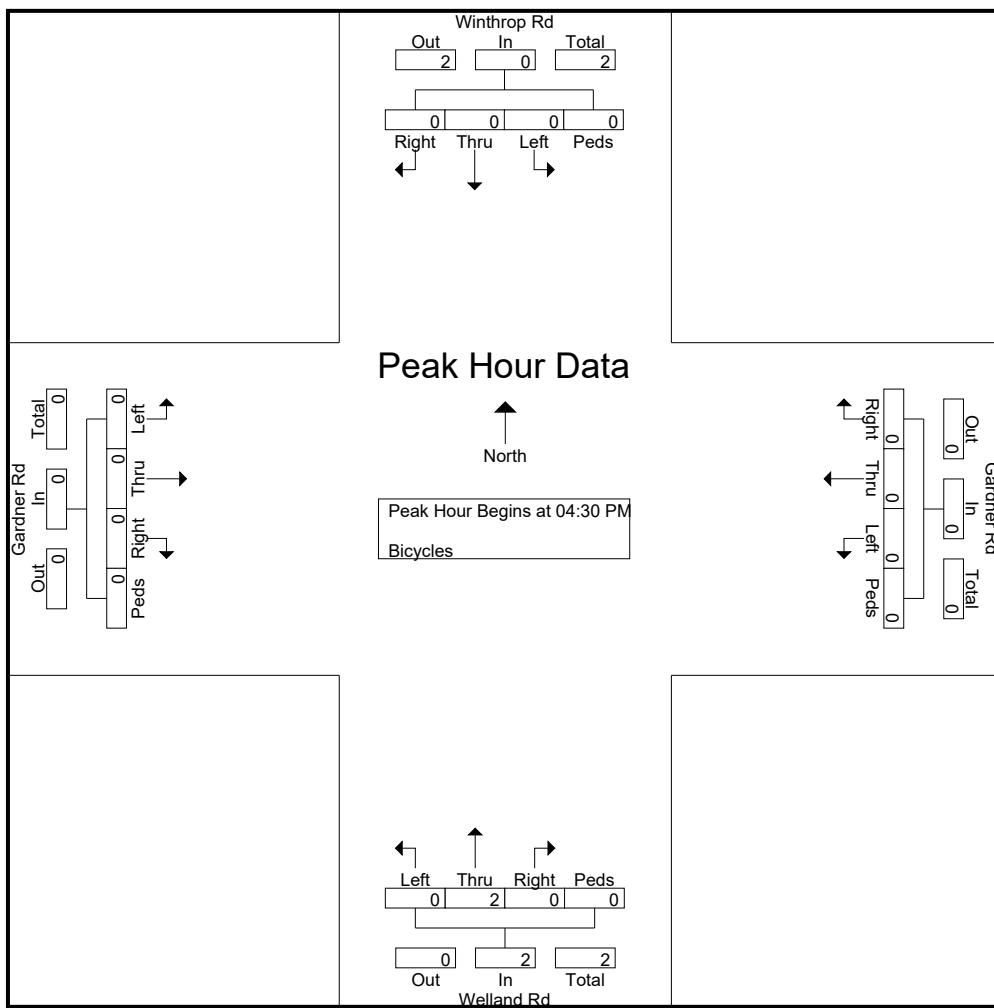


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Town of Brookline
Engineering/Transportation Division

Gardner Rd at
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Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
% App. Total	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.500



2.

Winthrop Rd Northbound Looking Right Stop Control



Winthrop Rd Northbound Looking Left Stop Control



2.

Wealland Rd Northbound Looking Right Stop Control



Welland Rd Northbound Looking Left Stop Control



2.

Hancock Rd Norghtbound Looking Right Stop Control



Hancock Rd Northbound Looking Left Stop Control



2.

Brookline Police Crash Data

Case #	Date	Day	Time	Location	# of Vehicles	INJ	Report	Reason	Citation	Type	Frequency
	2/28/2019	Thursday	16:53	Welland Rd/Gardner Rd	2	N	N	Fail Use Care in Backing	N	Multi Vehicle/Property	I

Welland Rd / Gardner Rd



TOWN of BROOKLINE
Massachusetts
 Department of Public Works

Erin Chute Gallentine
Commissioner

MEMORANDUM

TO: Transportation Board

FROM: Robert T King, PE
 Director of Engineering and Transportation

DATE: March 13, 2023

SUBJECT: March 15, 2023 Meeting of the Transportation Board

**Item # 7: DISCUSSION AND ACTION ON THE REQUEST BY SHARON HESSNEY FOR
 MARKED CROSSWALKS AT THE NAPLES RD AT ABBOTTSFORD RD
 INTERSECTION.**

Sharon Hessney, a resident of 140 Naples Road, has requested the installation of crosswalks and ADA compliant wheel chair ramps for the Naples Road at Abbottsford Road intersection to increase pedestrian safety. Staff conducted the attached Naples Road at Abbottsford Road Crosswalk Study to determine if the crosswalk installation met the criteria contained within the Town's Crosswalk Policy Guidelines. The report recommends favorable action. However, note that the intersection will need ADA compliant wheel chair ramps installed prior to the crosswalks being painted. The timeline for the installation of new wheel chair ramps will be dependent on available funding through the Department's sidewalk contract.

DPW RECOMMENDATION:

DPW – Transportation Division staff recommend that the Transportation Board vote to install a crosswalk with ADA compliant wheel chair ramps at the intersection of Naples Road at Abbottsford Road.

Attachments: 6) Resident Request

Attachments: 7) Naples Road at Abbottsford Road Crosswalk Study

Attachments: 8) Naples Road at Abbottsford Road Crosswalk Study Appendix

3.

Sharon Hessney
140 Naples Road
Brookline, MA 02446

January 12, 2023

Mr. Daniel Martin
Sustainable Transportation Engineer
Transportation Division of DPW
Town of Brookline

Re: Improvements to the intersection of Naples Road and Abbottsford Road

Dear Mr. Martin:

As a Brookline resident at the intersection of Naples and Abbottsford Roads, I am requesting that the Town of Brookline install:

- 4 crosswalks on each of the sides of the intersection
- 2 STOP signs painted in each direction on Naples Road
- 4 ADA sidewalk curb ramps, one at each corner of the intersection

These improvements will replace the temporary STOP sign and cone at the intersection. This temporary sign and cone have discouraged drivers from speeding through the intersection. Before they were placed on Naples, there were crashes at the intersection regularly including three in one weekend and a near-fatal crash on December 10, 2021. Since the installation, there have been no crashes.

Attached are car counts for the intersection. Note that, though cars still speed through the intersection, the number has declined substantially.

The neighbors and myself will attend any meetings to speak about the need for these improvements.

Thank you.

Sincerely,

Sharon Hessney
617 – 970 – 2279
shessney@gmail.com



TOWN OF BROOKLINE

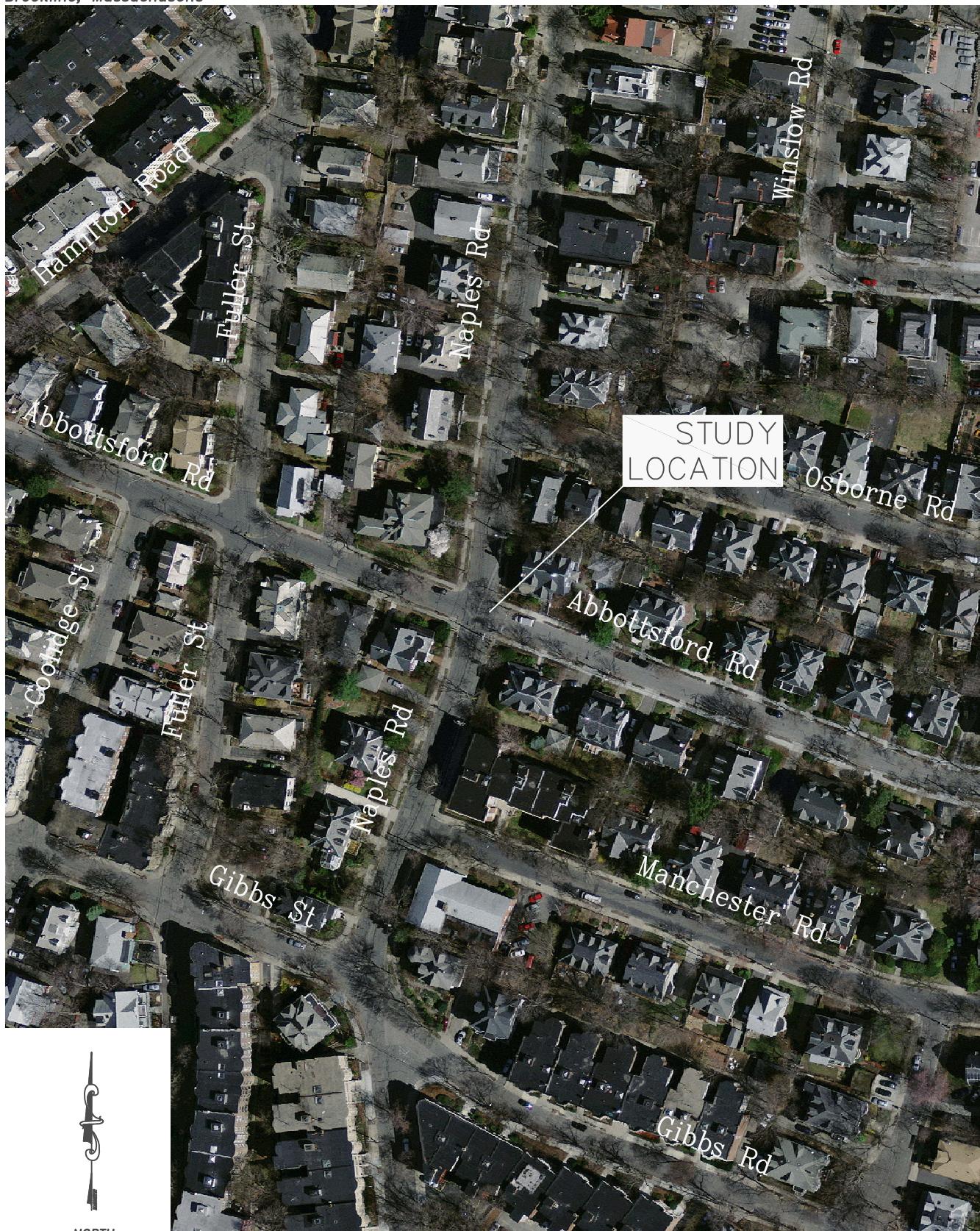
**Department of Public Works
333 Washington Street
Brookline, MA 02445-6863**

Marked Crosswalk Assessment For Naples Road at Abbottsford Road

3.

Overview

The purpose of this study is to determine if marked crosswalks are warranted at the Naples Road and Abbotsford Road intersection. The study location can be seen in **Figure 1**. Recommendations will be based on the guidelines found in the Town of Brookline's latest Crosswalk Policy and Design Guidelines. The Crosswalk Policy and Design Guidelines suggest the installation of a crosswalk if there is high potential for vehicle and pedestrian conflicts that could be mitigated by a marked crosswalk.



BROOKLINE ENGINEERING/TRANSPORTATION DIVISION
333 WASHINGTON ST 4TH FLOOR, BROOKLINE, MA
TELEPHONE : (617) 730-2177 FAX: (617) 264-6450



Figure 1

Study Location

Existing Conditions

Roadways

Naples Road is classified by the Massachusetts Department of Transportation (MassDOT) as a local road under Town Jurisdiction. The roadway generally runs in a north-south direction and provides a connection between Harvard Street and Commonwealth Avenue. Naples Road is approximately 32' wide and provides one travel lane in each direction, a bike lane in the north direction, and on street parking on the west side of the road. The unposted statuary speed limit is 25 mph. Land use along Naples Road is primarily residential.

Abbottsford Road is classified by MassDOT as a local road under Town Jurisdiction. The roadway generally runs in an east-west direction and provides a connection from Babcock Street to Thorndike Street. Abbottsford Road is approximately 24' wide and provides one travel lane in the west direction. On-street parking is permitted on the north side of the street. The unposted statuary speed limit is 25 mph. Land use along Abbottsford Road is residential.

Intersections

Naples Road and Abbottsford Road meet to form a four-way intersection. The intersection operates with all-way stop control. Abbottsford Road is a one-way roadway and only has a stop control on the west-bound approach. Sidewalks are provided on both sides of Naples Road and Abbottsford Road. Land use at the intersection is residential.

There is one street light located on the northeast corner of the intersection.

Traffic Volumes

Peak Hour Pedestrian Volumes:

Manual turning movement counts (TMCs) were conducted at the study intersection in February 2022. Traffic data was collected during the weekday morning (7:00 AM to 9:00 PM), and weekday evening (4:00 PM to 6:00 PM). These hours represent the peak periods of pedestrian and vehicular volume. Pedestrian crossings during the peak hour are summarized in **Table 1** and vehicle movements are depicted in **Figure 2**.

Table 1: Pedestrian Crossing for Naples Road at Abbotsford Road

<u>Pedestrians Crossing Per Peak Hour</u>	
Weekday Morning	63
Weekday Evening	70

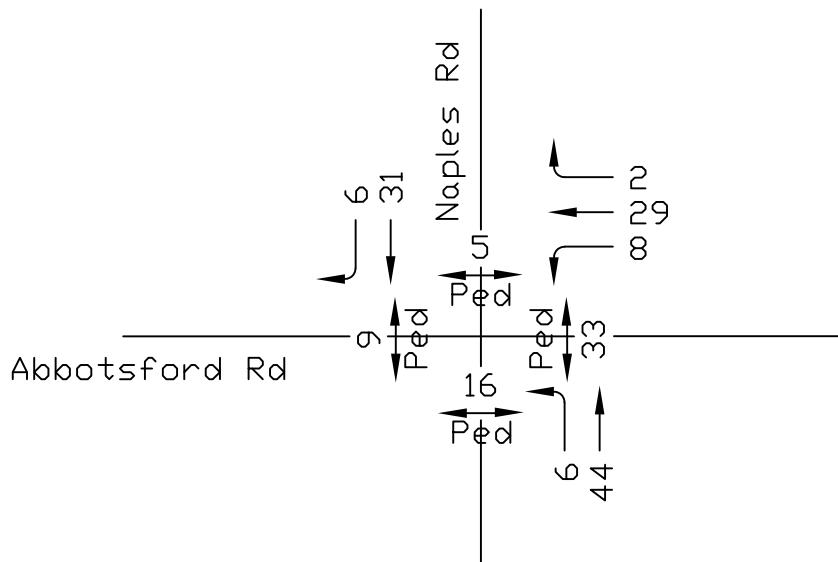
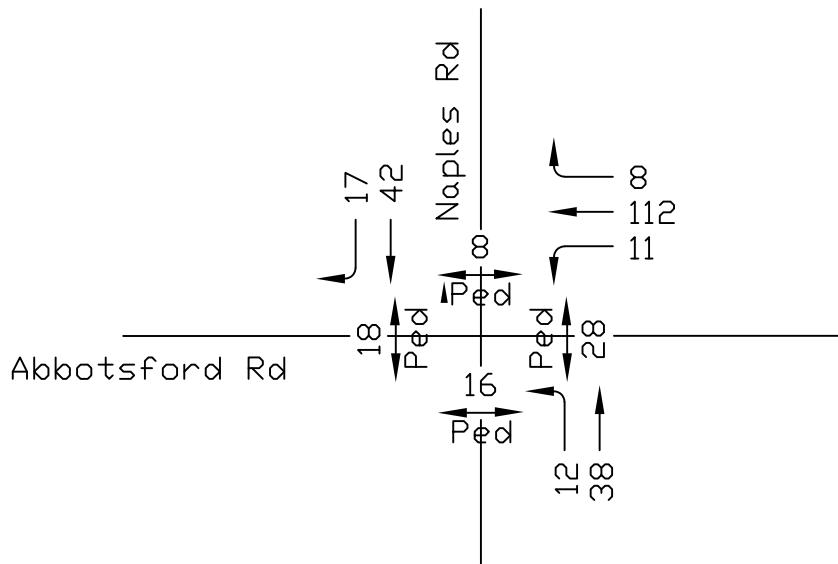
As summarized in **Table 1**, there were 63 pedestrians observed crossing at the study intersection per peak morning hour and 70 pedestrians per peak evening hour. Count data is provided in the **Appendix**.

Crash Analysis

In order to identify accident trends and safety characteristics for the study intersection accident reports were obtained from the Brookline Police Department for the latest available five-year period. Detailed crash information can be found in the **Appendix**.

Between January 1, 2018 and December 12, 2021, there have been 11 traffic crashes reported at the intersection of Abbotsford Rd and Naples Rd or at a residential address in the immediate area. Four crashes occurred in Calendar Year 2018, two crashes occurred in Calendar Year 2019, three crashes occurred in Calendar Year 2020, and two crashes in Calendar Year 2021. No crashes were reported at the study location in 2022 or thus far in 2023.

Five of the total crashes resulted in a traffic citation being issued and corresponding report being written. Three citations were for Failure to Stop at a Stop Sign and two citations were for Failure to Yield the Right of Way. There was an additional report written for a crash in 2018 that did not result in a traffic citation being issued, but based on the report narrative one of the drivers failed to yield due to their line of sight being obstructed by a parked vehicle.

WEEKDAY MORNING

NORTH
Scale: Not to Scale

WEEKDAY EVENING

BROOKLINE ENGINEERING/TRANSPORTATION DIVISION
333 WASHINGTON ST 4TH FLOOR, BROOKLINE, MA
TELEPHONE : (617) 730-2319 FAX: (617) 264-6450



Figure 2

Peak Hour Traffic Volumes

3.

Stopping Sight Distance

The American Association of State and Transportation Officials (AASHTO) standards reference stopping sight distance as the relevant sight distance requirement for a pedestrian crossing. Stopping sight distance is the length of roadway ahead that is visible to the driver. The available sight distance on a roadway should be sufficiently long enough to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path, although greater length of visible roadway is desirable.

Sight lines for potential crosswalks at the approaches of the Naples Road and Abbotsford Road intersection are compared to minimum safe stopping sight distance (SSD) for the unposted statutory speed limit below in **Table 2** below. Sight line calculations are provided in the **Appendix**.

Table 2: Stopping Sight Distance for Naples Road at Abbotsford Road Intersection

Approach/Travel Direction	Available Sight Distance	AASHTO Recommended ¹ Statutory Speed (25mph)
Naples Road Southbound	>300'	155'
Naples Road Northbound	>300'	155'
Abbotsford Rd Westbound	>300'	155'

¹Recommended sight distance based on AASHTO, A Policy on Geometric Design of Highways and Streets. Based on driver height of eye of 3.5 feet to object height of 2.0 feet for and adjustments for roadway grade.

The approaches for the Naples Road and Abbotsford Road intersection each have over 300 feet of available SSD, exceeding AASHTO's minimum recommended distance. The study intersection's approaches, having adequate SSD, meet the standards for the installation of crosswalks.

Conclusion

The installation of crosswalks on all four legs of the Naples Road at Abbotsford Road intersection are recommended. Based on the number of pedestrians and existing traffic movement controls, crosswalks at this location may mitigate pedestrian and vehicular conflicts. The exiting wheel chair ramps are lacking detectable warning panels. The wheel chair ramps will need to be reconstructed with detectable warning panels before the crosswalks can be painted.

Appendix

- Resident Request
- Traffic Count Data
- Crash Data

3.

January 12, 2023

Dear Mr. Martin:

As a Brookline resident at the intersection of Naples and Abbottsford Roads, I am requesting that the Town of Brookline install:

- 4 crosswalks on each of the sides of the intersection
- 2 STOP signs painted in each direction on Naples Road
- 4 ADA sidewalk curb ramps, one at each corner of the intersection

These improvements will replace the temporary STOP sign and cone at the intersection. This temporary sign and cone have discouraged drivers from speeding through the intersection. Before they were placed on Naples, there were crashes at the intersection regularly including three in one weekend and a near-fatal crash on December 10, 2021. Since the installation, there have been no crashes.

Attached are three traffic counts for the intersection. Note that, though cars still speed through the intersection, the numbers have declined substantially.

The neighbors and myself will attend any meetings to speak about the need for these improvements.

Thank you.

Sincerely,

Sharon Hessney

617 – 970 – 2279

shessney@gmail.com

Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

Naples Rd
at Abbottsford Rd
Brookline, MA

File Name : Naples @ Abbottsford AM 9-18-19
Site Code : 00000001
Start Date : 9/18/2019
Page No : 1

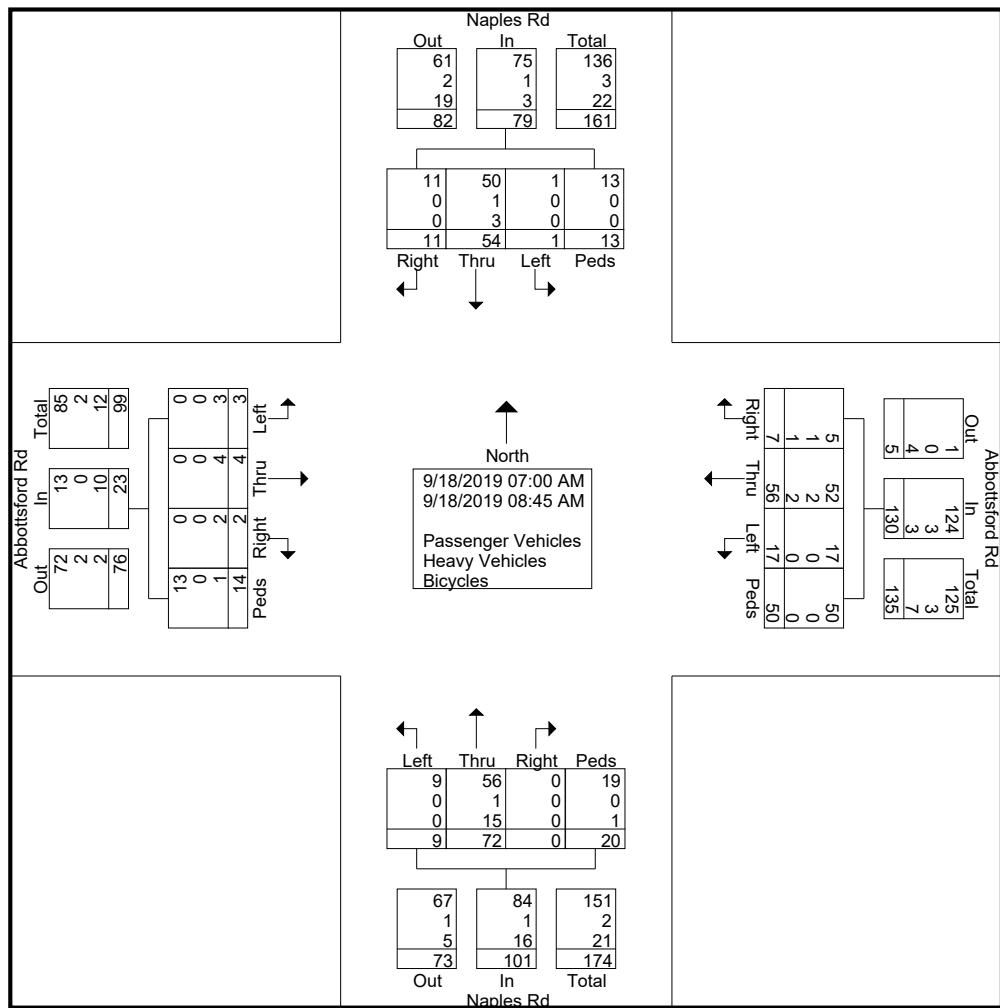
Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

	Naples Rd From North					Abbottsford Rd From East					Naples Rd From South					Abbottsford Rd From West					
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Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	1	7	0	0	8	2	5	2	6	15	0	7	1	2	10	0	0	1	3	4	37
07:15 AM	0	8	0	2	10	1	4	1	5	11	0	7	0	0	7	0	0	1	1	2	30
07:30 AM	0	4	0	2	6	1	8	0	15	24	0	11	2	6	19	1	0	1	7	9	58
07:45 AM	2	7	0	0	9	0	8	4	7	19	0	8	2	4	14	0	3	0	1	4	46
Total	3	26	0	4	33	4	25	7	33	69	0	33	5	12	50	1	3	3	12	19	171
08:00 AM	2	13	0	2	17	1	5	3	8	17	0	11	1	3	15	0	0	0	0	0	49
08:15 AM	2	7	0	1	10	0	8	1	3	12	0	14	1	3	18	0	1	0	1	2	42
08:30 AM	3	6	0	2	11	2	7	3	3	15	0	9	1	1	11	1	0	0	0	1	38
08:45 AM	1	2	1	4	8	0	11	3	3	17	0	5	1	1	7	0	0	0	1	1	33
Total	8	28	1	9	46	3	31	10	17	61	0	39	4	8	51	1	1	0	2	4	162
Grand Total	11	54	1	13	79	7	56	17	50	130	0	72	9	20	101	2	4	3	14	23	333
Apprch %	13.9	68.4	1.3	16.5		5.4	43.1	13.1	38.5		0	71.3	8.9	19.8		8.7	17.4	13	60.9		
Total %	3.3	16.2	0.3	3.9	23.7	2.1	16.8	5.1	15	39	0	21.6	2.7	6	30.3	0.6	1.2	0.9	4.2	6.9	
Passenger Vehicles	100	92.6	100	100	94.9	71.4	92.9	100	100	95.4	0	77.8	100	95	83.2	0	0	0	92.9	56.5	88.9
Heavy Vehicles	0	1.9	0	0	1.3	14.3	3.6	0	0	2.3	0	1.4	0	0	1	0	0	0	0	0	1.5
Bicycles	0	3	0	0	3	1	2	0	0	3	0	15	0	1	16	2	4	3	1	10	32
% Bicycles	0	5.6	0	0	3.8	14.3	3.6	0	0	2.3	0	20.8	0	5	15.8	100	100	100	7.1	43.5	9.6

Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

File Name : Naples @ Abbottsford AM 9-18-19
Site Code : 00000001
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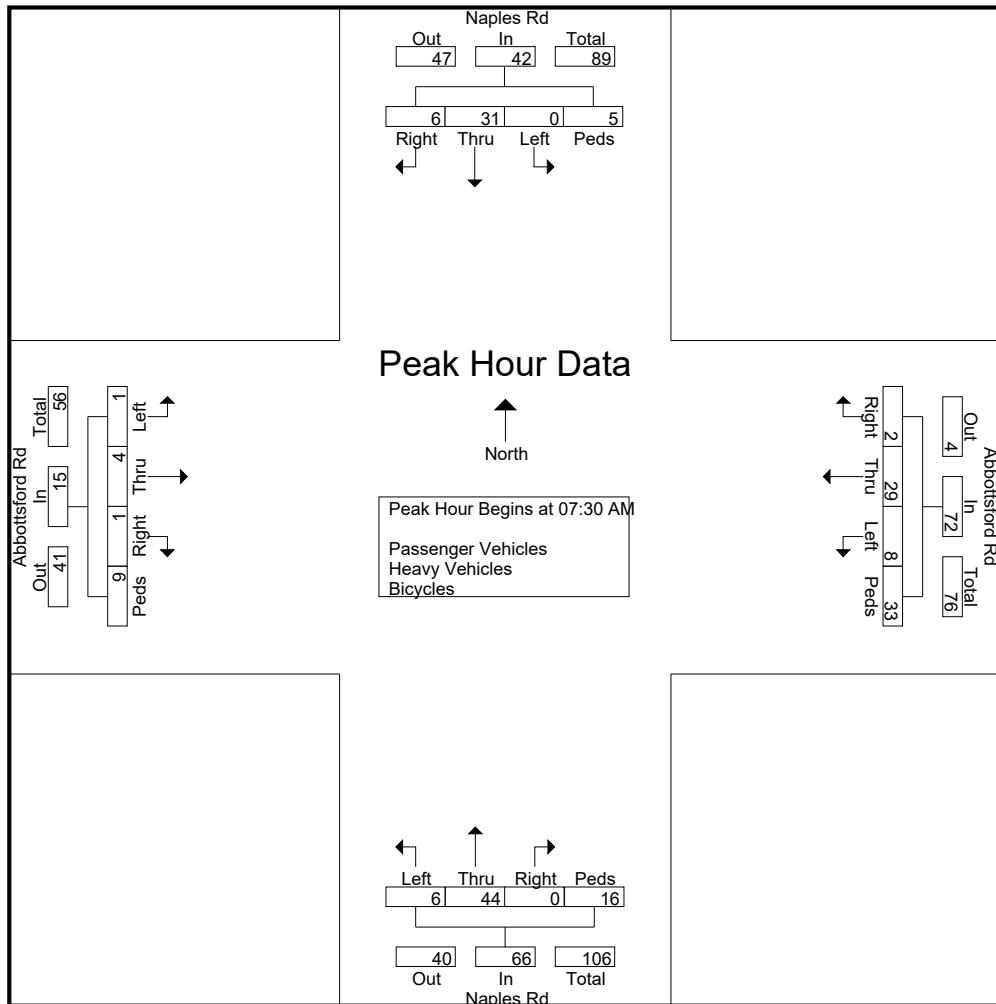


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08:00 AM	2	13	0	2	17	1	5	3	8	17	0	11	1	3	15	0	0	0	0	0	49
08:15 AM	2	7	0	1	10	0	8	1	3	12	0	14	1	3	18	0	1	0	1	2	42
Total Volume	6	31	0	5	42	2	29	8	33	72	0	44	6	16	66	1	4	1	9	15	195
% App. Total	14.3	73.8	0	11.9		2.8	40.3	11.1	45.8		0	66.7	9.1	24.2		6.7	26.7	6.7	60		
PHF	.750	.596	.000	.625	.618	.500	.906	.500	.550	.750	.000	.786	.750	.667	.868	.250	.333	.250	.321	.417	.841

Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

File Name : Naples @ Abbottsford AM 9-18-19
Site Code : 00000001
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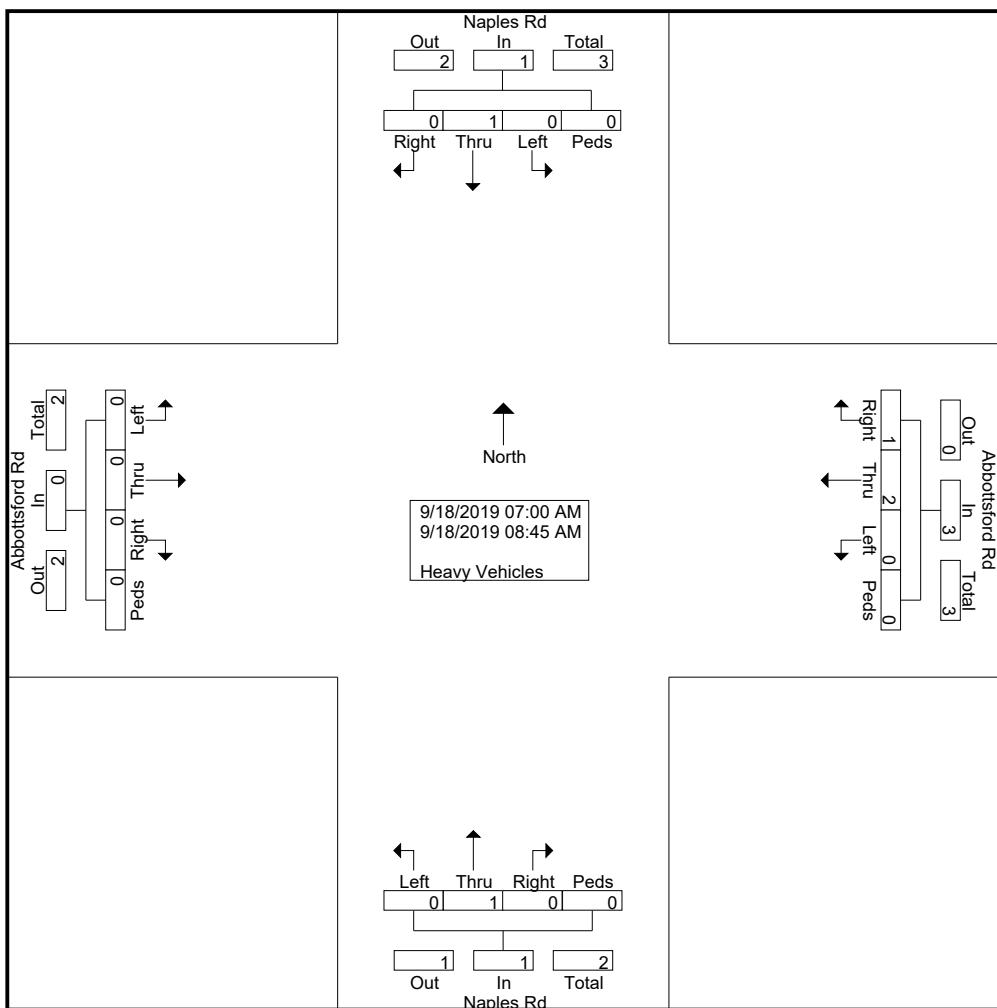
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Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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Grand Total	0	1	0	0	1	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	5
Apprch %	0	100	0	0		33.3	66.7	0	0		0	100	0	0	0	0	0	0	0	0	0
Total %	0	20	0	0	20	20	40	0	0	60	0	20	0	0	20	0	0	0	0	0	0



Town of Brookline

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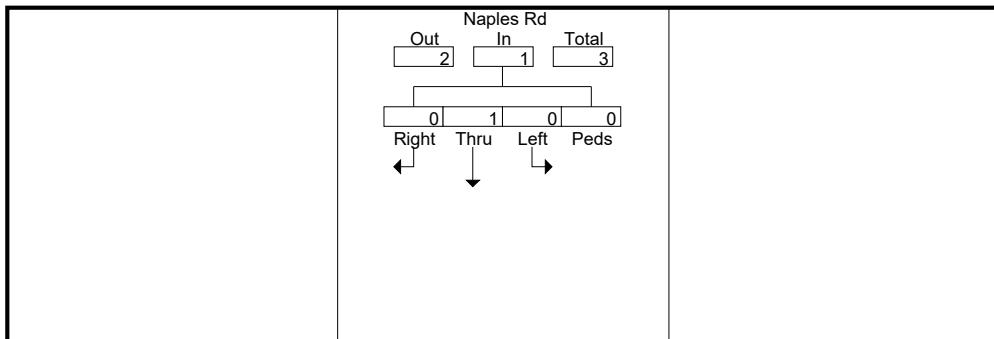
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Start Date : 9/18/2019
Page No : 2

	Naples Rd From North					Abbottsford Rd From East					Naples Rd From South					Abbottsford Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total

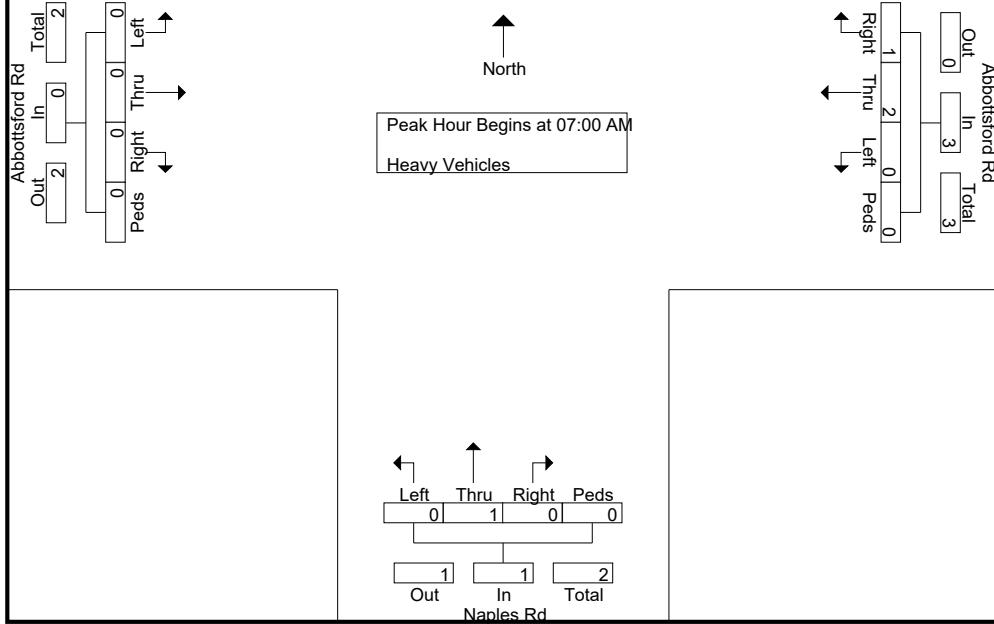
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

07:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	1	0	0	1	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	5
% App. Total	0	100	0	0		33.3	66.7	0	0		0	100	0	0	0	0	0	0	0	0	
PHF	.000	.250	.000	.000	.250	.250	.250	.000	.000	.375	.000	.250	.000	.000	.250	.000	.000	.000	.000	.625	



Peak Hour Data



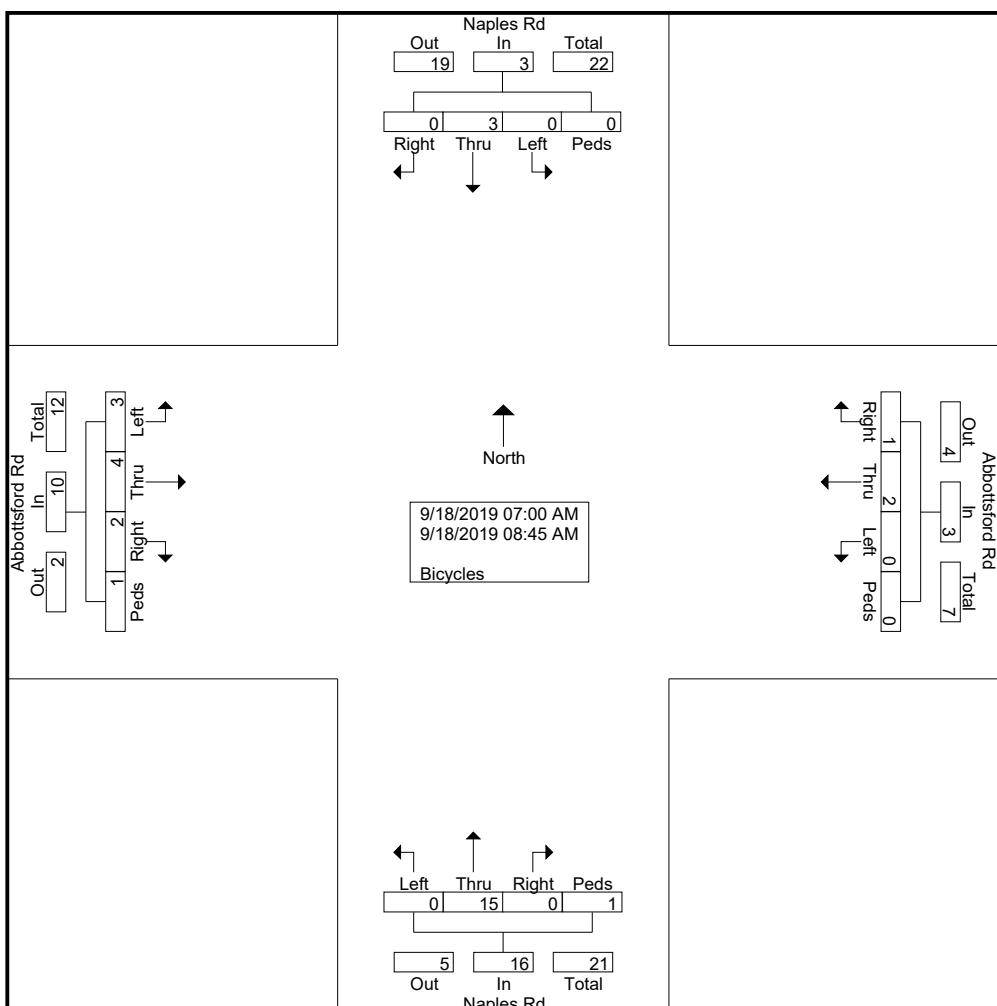
Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

Naples Rd
at Abbottsford Rd
Brookline, MA

File Name : Naples @ Abbottsford AM 9-18-19
Site Code : 00000001
Start Date : 9/18/2019
Page No : 1

	Groups Printed- Bicycles																				
	Naples Rd From North				Abbottsford Rd From East				Naples Rd From South				Abbottsford Rd From West								
Start Time	Right	Thru	Left	Peds	App.Total	Right	Thru	Left	Peds	App.Total	Right	Thru	Left	Peds	App.Total	Right	Thru	Left	Peds	App.Total	Int.Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	2
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	1	4	1	0	1	1	3	7
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
Total	0	0	0	0	0	1	1	0	0	2	0	3	0	1	4	1	3	3	1	8	14
08:00 AM	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	1	0	0	1	7
08:30 AM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	1	0	0	0	0	4
*** BREAK ***																					
Total	0	3	0	0	3	0	1	0	0	1	0	12	0	0	12	1	1	1	0	0	18
Grand Total	0	3	0	0	3	1	2	0	0	3	0	15	0	1	16	2	4	3	1	10	32
Apprch %	0	100	0	0		33.3	66.7	0	0		0	93.8	0	6.2		20	40	30	10		
Total %	0	9.4	0	0	9.4	3.1	6.2	0	0	9.4	0	46.9	0	3.1	50	6.2	12.5	9.4	3.1	31.2	

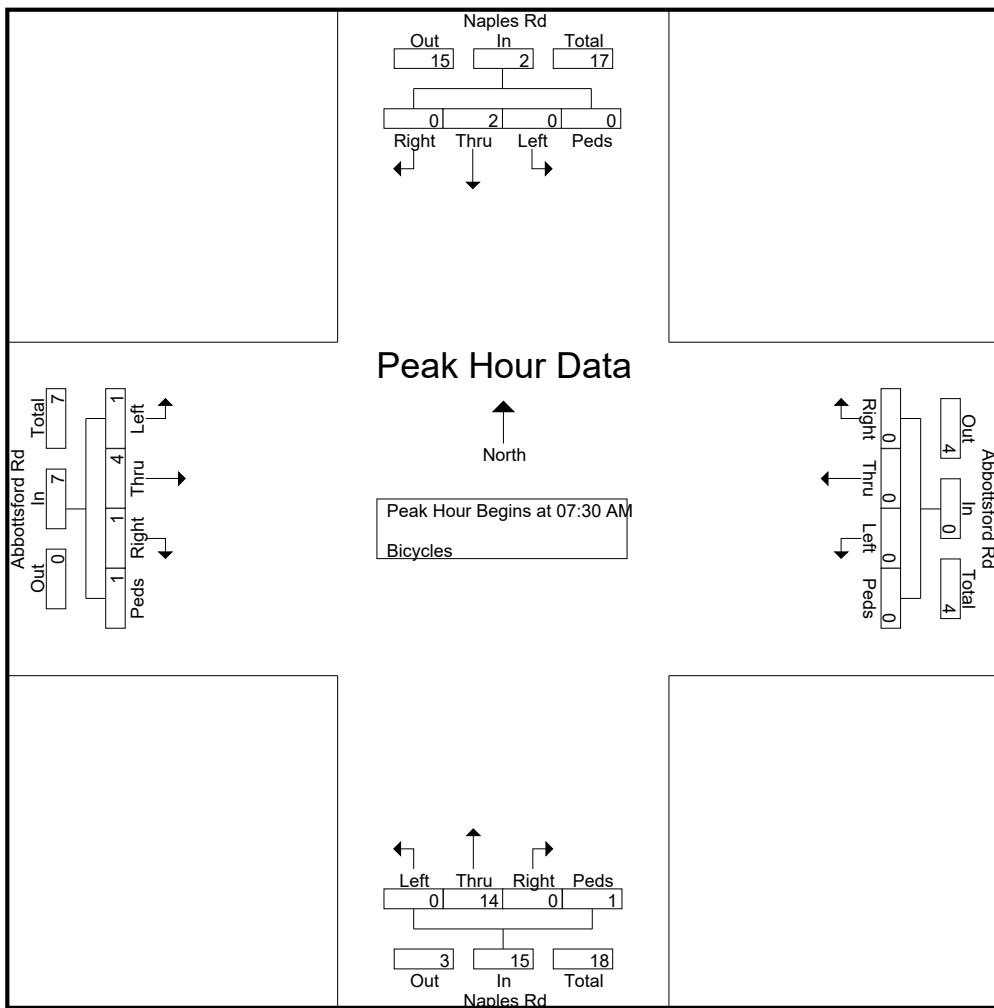


Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

File Name : Naples @ Abbottsford AM 9-18-19
Site Code : 00000001
Start Date : 9/18/2019
Page No : 2

Start Time	Naples Rd From North					Abbottsford Rd From East					Naples Rd From South					Abbottsford Rd From West					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	1	4	1	0	1	1	3	7
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
08:00 AM	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	1	0	0	1	7
Total Volume	0	2	0	0	2	0	0	0	0	0	0	14	0	1	15	1	4	1	1	7	24
% App. Total	0	100	0	0	0	0	0	0	0	0	0	93.3	0	6.7	14.3	57.1	14.3	14.3	14.3	14.3	
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.583	.000	.250	.625	.250	.333	.250	.250	.583	.857



Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

Naples Rd
Abbottsford Rd
Brookline, MA

File Name : Naples @ Abbottsford PM 9-18-19
Site Code : 00000002
Start Date : 9/19/2019
Page No : 1

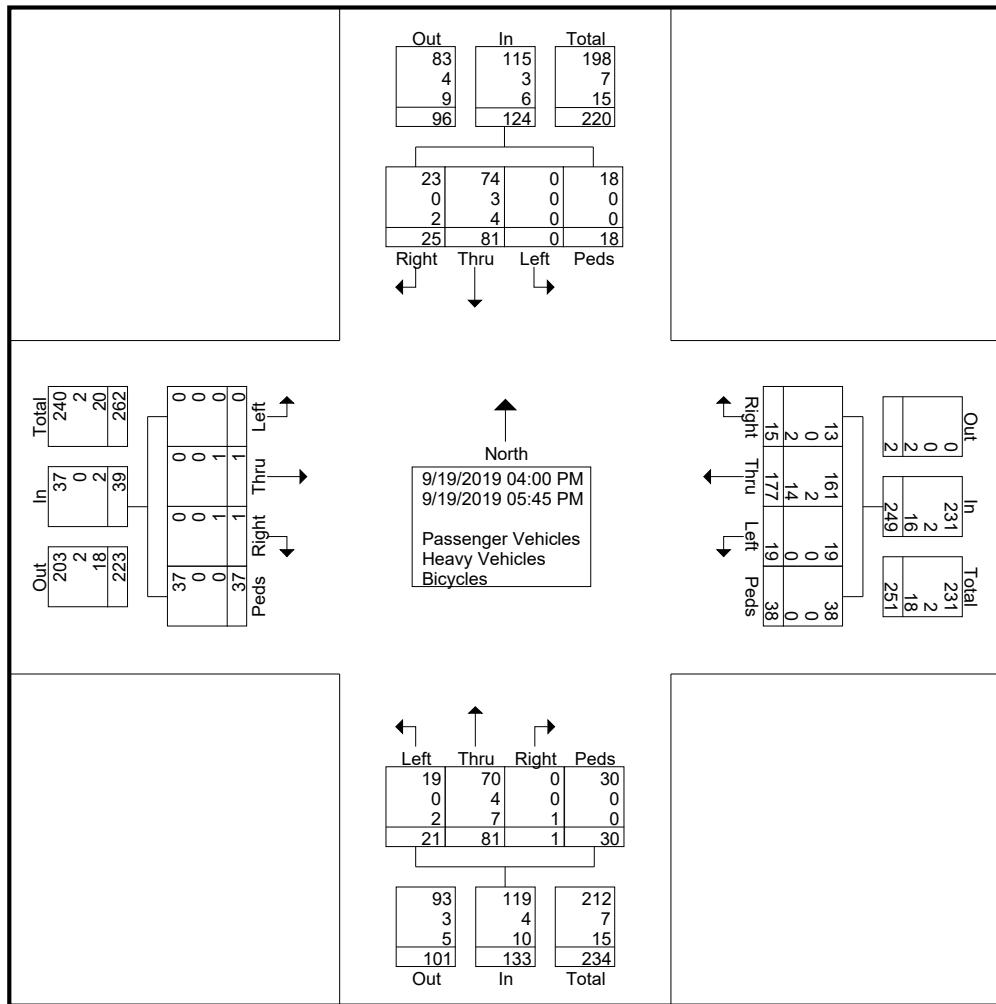
Groups Printed- Passenger Vehicles - Heavy Vehicles - Bicycles

	From North				From East				From South				From West				Int. Total					
	Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Factor		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM		2	10	0	2	14	2	16	3	3	24	0	13	0	4	17	0	0	0	5	5	60
04:15 PM		2	7	0	0	9	1	15	2	0	18	0	8	1	3	12	1	0	0	4	5	44
04:30 PM		2	12	0	4	18	2	15	1	1	19	0	8	3	3	14	0	0	0	3	3	54
04:45 PM		2	10	0	4	16	2	19	2	6	29	1	14	5	4	24	0	0	0	7	7	76
Total		8	39	0	10	57	7	65	8	10	90	1	43	9	14	67	1	0	0	19	20	234
05:00 PM		5	9	0	4	18	3	26	3	4	36	0	10	4	6	20	0	0	0	3	3	77
05:15 PM		1	17	0	0	18	4	27	3	10	44	0	8	2	5	15	0	1	0	5	6	83
05:30 PM		6	10	0	2	18	0	24	2	7	33	0	6	4	2	12	0	0	0	5	5	68
05:45 PM		5	6	0	2	13	1	35	3	7	46	0	14	2	3	19	0	0	0	5	5	83
Total		17	42	0	8	67	8	112	11	28	159	0	38	12	16	66	0	1	0	18	19	311
Grand Total		25	81	0	18	124	15	177	19	38	249	1	81	21	30	133	1	1	0	37	39	545
Apprch %		20.2	65.3	0	14.5		6	71.1	7.6	15.3		0.8	60.9	15.8	22.6		2.6	2.6	0	94.9		
Total %		4.6	14.9	0	3.3	22.8	2.8	32.5	3.5	7	45.7	0.2	14.9	3.9	5.5	24.4	0.2	0.2	0	6.8	7.2	
Passenger Vehicles		92	91.4	0	100	92.7	86.7	91	100	100	92.8	0	86.4	90.5	100	89.5	0	0	0	100	94.9	92.1
Heavy Vehicles		0	3.7	0	0	2.4	0	1.1	0	0	0.8	0	4.9	0	0	3	0	0	0	0	0	1.7
Bicycles		2	4	0	0	6	2	14	0	0	16	1	7	2	0	10	1	1	0	0	2	34
% Bicycles		8	4.9	0	0	4.8	13.3	7.9	0	0	6.4	100	8.6	9.5	0	7.5	100	100	0	0	5.1	6.2

Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

File Name : Naples @ Abbottsford PM 9-18-19
Site Code : 00000002
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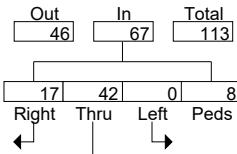


Start Time	From North				From East				From South				From West				Int. Total				
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	5	9	0	4	18	3	26	3	4	36	0	10	4	6	20	0	0	0	3	3	77
05:15 PM	1	17	0	0	18	4	27	3	10	44	0	8	2	5	15	0	1	0	5	6	83
05:30 PM	6	10	0	2	18	0	24	2	7	33	0	6	4	2	12	0	0	0	5	5	68
05:45 PM	5	6	0	2	13	1	35	3	7	46	0	14	2	3	19	0	0	0	5	5	83
Total Volume	17	42	0	8	67	8	112	11	28	159	0	38	12	16	66	0	1	0	18	19	311
% App. Total	25.4	62.7	0	11.9		5	70.4	6.9	17.6		0	57.6	18.2	24.2		0	5.3	0	94.7		
PHF	.708	.618	.000	.500	.931	.500	.800	.917	.700	.864	.000	.679	.750	.667	.825	.000	.250	.000	.900	.792	.937

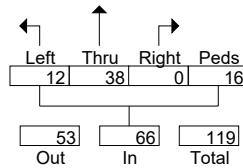
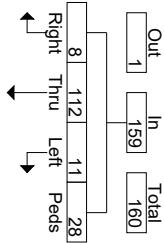
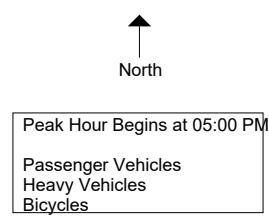
Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

File Name : Naples @ Abbottsford PM 9-18-19
Site Code : 00000002
Start Date : 9/19/2019
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Peak Hour Data



Town of Brookline

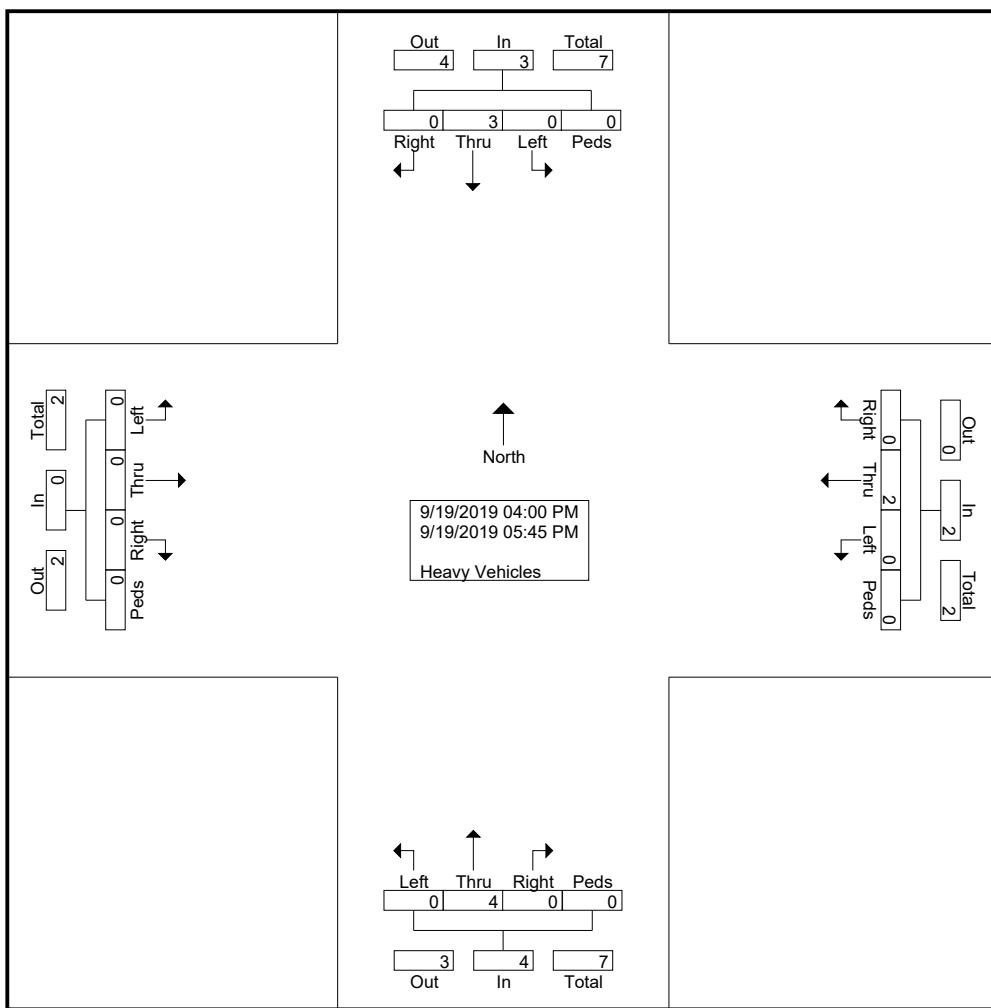
Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

Naples Rd
Abbottsford Rd
Brookline, MA

File Name : Naples @ Abbottsford PM 9-18-19
Site Code : 00000002
Start Date : 9/19/2019
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Groups Printed- Heavy Vehicles

	From North				From East				From South				From West				App. Total	Int. Total
	Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
*** BREAK ***																		
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	2
*** BREAK ***																		
05:15 PM	0	1	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	2
05:30 PM	0	2	0	0	2	2	0	0	0	0	0	0	1	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Total	0	3	0	0	3	3	0	1	0	0	1	0	3	0	0	0	0	7
Grand Total	0	3	0	0	3	3	0	2	0	0	2	0	4	0	0	4	0	9
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	100	0	0	0	0	0
Total %	0	33.3	0	0	33.3	33.3	0	22.2	0	0	22.2	0	44.4	0	0	44.4	0	0

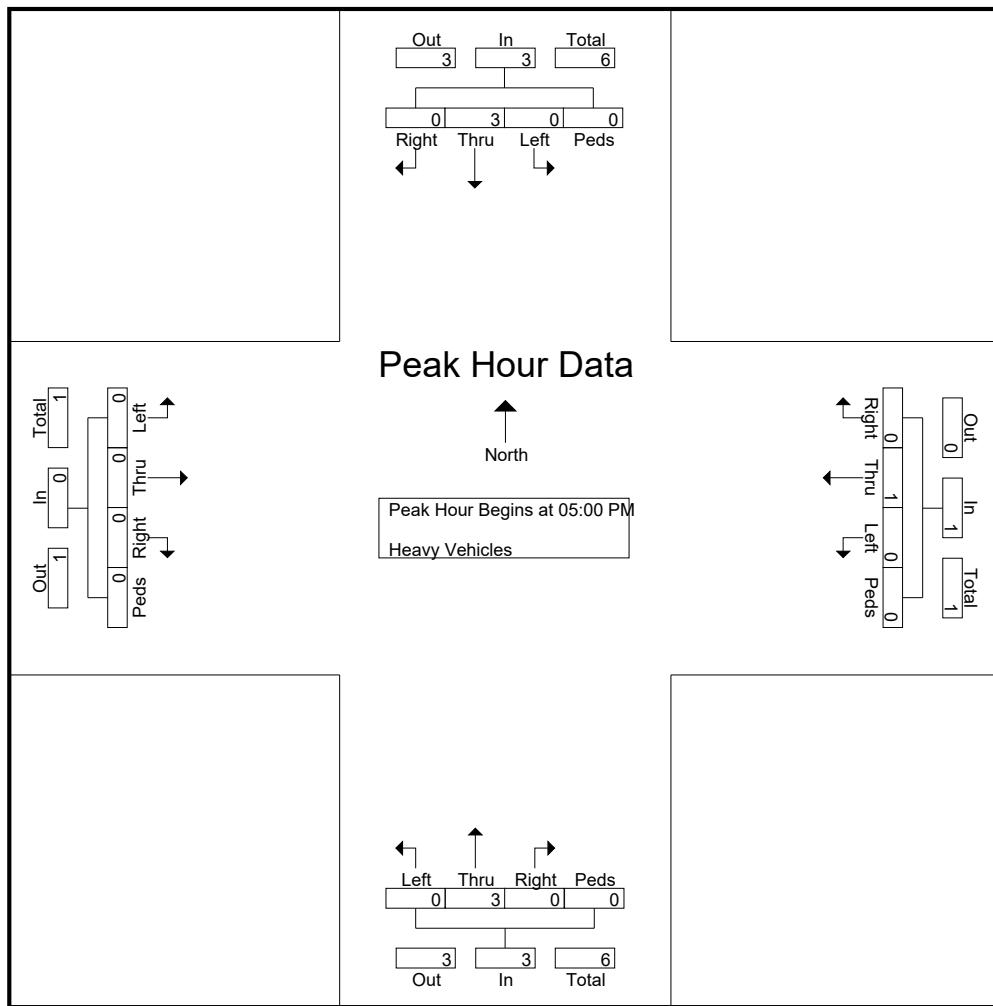


Town of Brookline

Engineering/Transportation Department
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File Name : Naples @ Abbottsford PM 9-18-19
Site Code : 00000002
Start Date : 9/19/2019
Page No : 2

Start Time	From North					From East					From South					From West				
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 05:00 PM																				
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
Total Volume	0	3	0	0	3	0	1	0	0	1	0	3	0	0	3	0	0	0	0	7
% App. Total	0	100	0	0	0	0	100	0	0	0	0	100	0	0	0	0	0	0	0	0
PHF	.000	.375	.000	.000	.375	.000	.250	.000	.000	.250	.000	.375	.000	.000	.375	.000	.000	.000	.000	.583



Town of Brookline

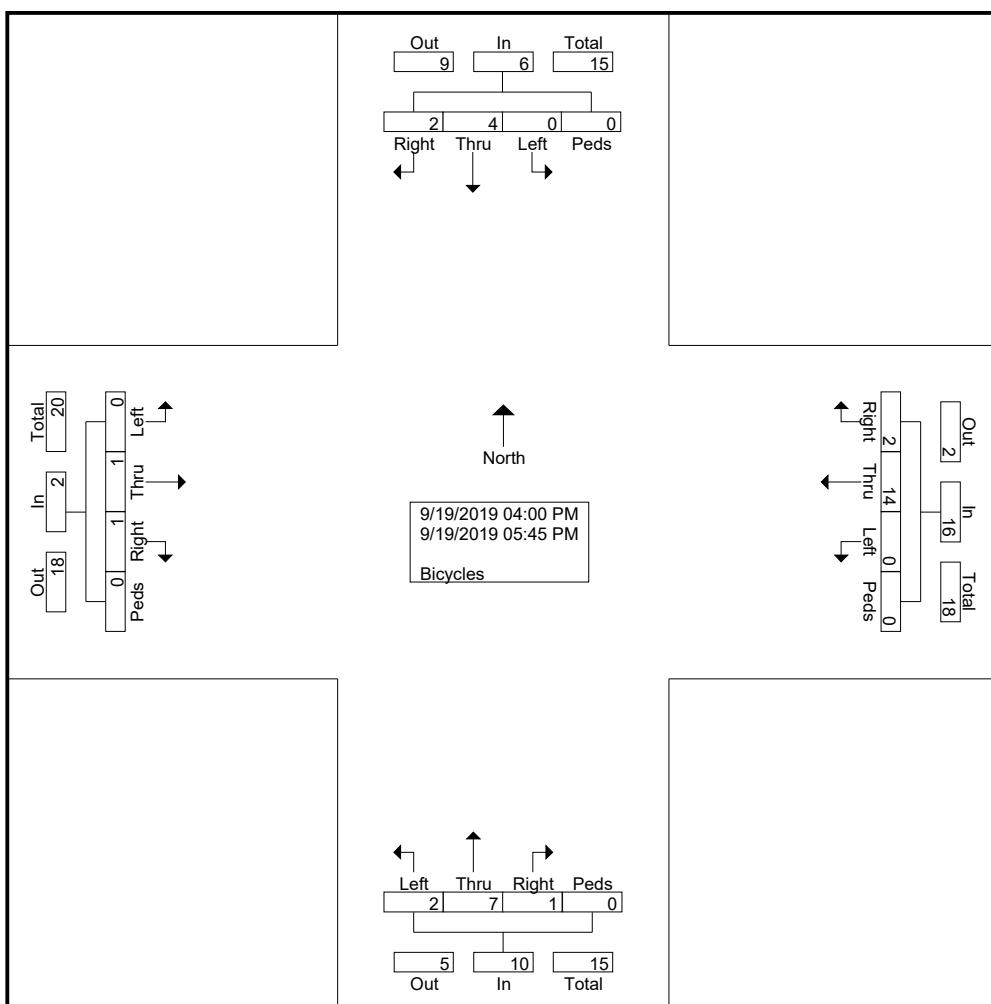
Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

Naples Rd
Abbottsford Rd
Brookline, MA

File Name : Naples @ Abbottsford PM 9-18-19
Site Code : 00000002
Start Date : 9/19/2019
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Groups Printed- Bicycles

	From North				From East				From South				From West				Int. Total		
	Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total			
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0		
04:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2		
04:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	3		
04:30 PM	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1		
04:45 PM	0	1	0	0	1	1	2	1	0	0	3	1	0	1	0	2	6		
Total		1	1	0	0	2	2	4	0	0	6	1	1	1	0	3	1	12	
05:00 PM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	
05:15 PM	1	1	0	0	2	2	0	3	0	0	3	0	3	1	0	4	0	10	
05:30 PM	0	2	0	0	2	2	0	3	0	0	3	0	1	0	0	1	0	6	
05:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	0	3	
Total		1	3	0	0	4	0	10	0	0	10	0	6	1	0	7	0	1	22
Grand Total		2	4	0	0	6	2	14	0	0	16	1	7	2	0	10	1	1	34
Apprch %	33.3	66.7	0	0		12.5	87.5	0	0	0	10	70	20	0	0	50	50	0	
Total %	5.9	11.8	0	0	17.6	5.9	41.2	0	0	47.1	2.9	20.6	5.9	0	29.4	2.9	2.9	0	5.9

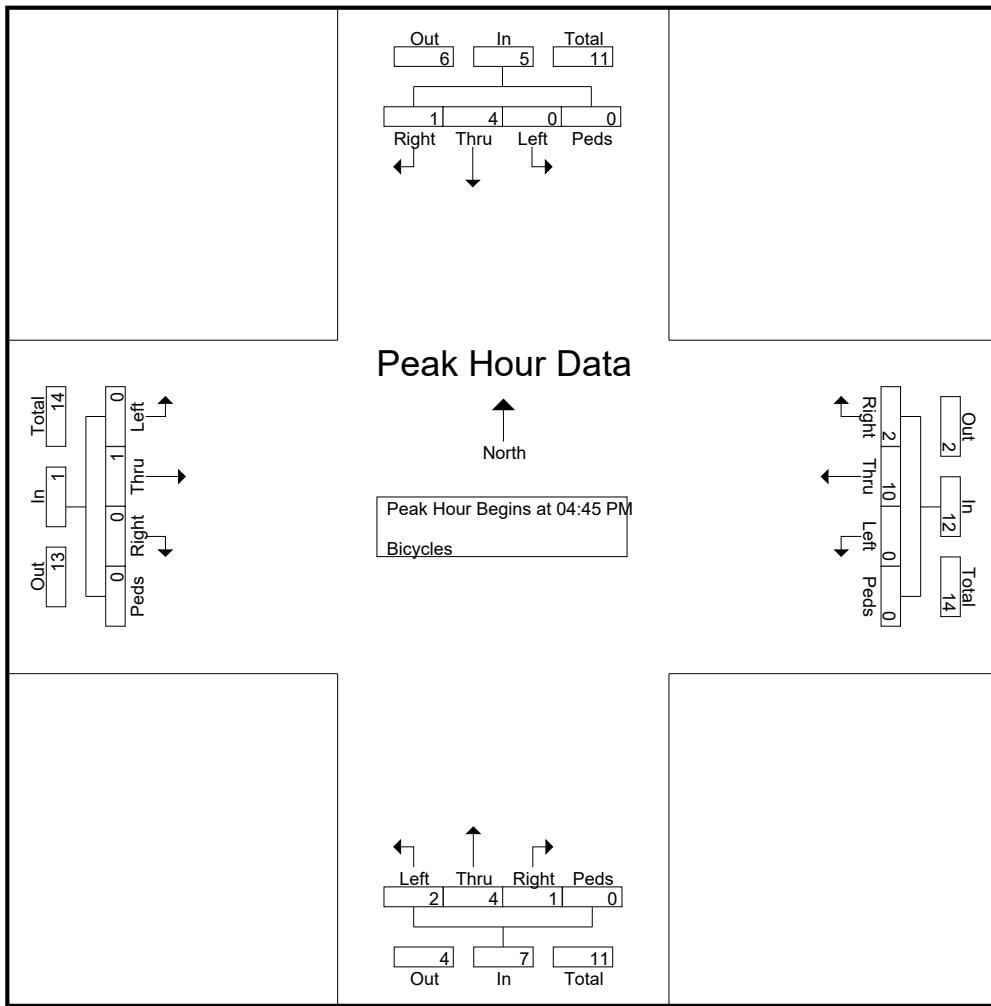


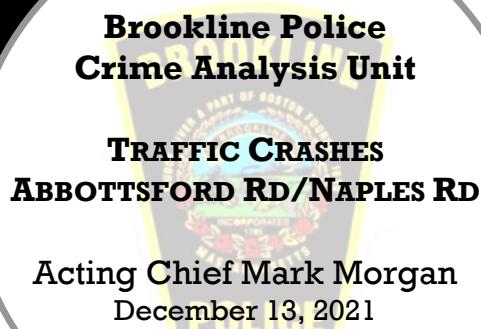
Town of Brookline

Engineering/Transportation Department
333 Washington St, Brookline MA, 02445

File Name : Naples @ Abbottsford PM 9-18-19
Site Code : 00000002
Start Date : 9/19/2019
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Start Time	From North					From East					From South					From West					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	1	0	0	1	2	1	0	0	3	1	0	1	0	2	0	0	0	0	0	6
05:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	1	1	0	0	2	0	3	0	0	3	0	3	1	0	4	0	1	0	0	1	10
05:30 PM	0	2	0	0	2	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	6
Total Volume	1	4	0	0	5	2	10	0	0	12	1	4	2	0	7	0	1	0	0	1	25
% App. Total	20	80	0	0		16.7	83.3	0	0		14.3	57.1	28.6	0		0	100	0	0		
PHF	.250	.500	.000	.000	.625	.250	.833	.000	.000	1.00	.250	.333	.500	.000	.438	.000	.250	.000	.000	.250	.625





The following is a look at traffic crashes that occurred at and in the proximate area of the intersection of Abbottsford Rd and Naples Rd, between January 1, 2018 and December 12, 2021.

Between January 1, 2018 and December 12, 2021, there have been 11 traffic crashes reported at the intersection of Abbottsford Rd and Naples Rd or at a residential address in the immediate area. Four crashes occurred in Calendar Year 2018, two crashes occurred in Calendar Year 2019, three crashes occurred in Calendar Year 2020, and two crashes have occurred thus far in Calendar Year 2021.

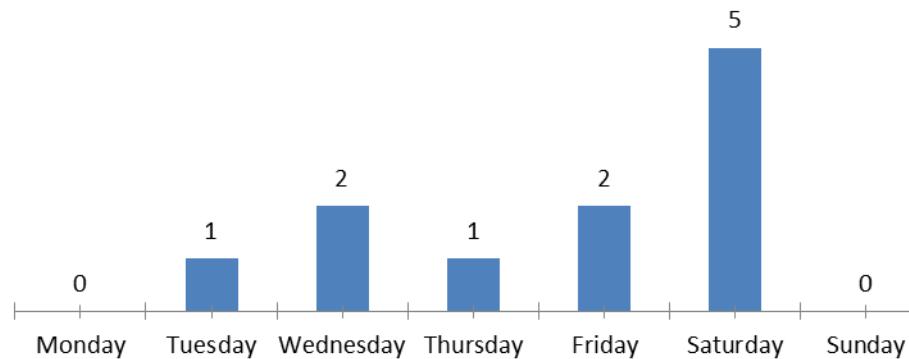
Five of the total crashes resulted in a traffic citation being issued and corresponding report being written. Three citations were for Failure to Stop at a Stop Sign and two citations were for Failure to Yield the Right of Way. There was an additional report written for a crash in 2018 that did not result in a traffic citation being issued, but based on the report narrative one of the drivers failed to yield the right of way, due to their line of sight being obstructed by a parked vehicle.

Below is a breakdown of the eleven traffic crashes by type.

Crash Type	Date	Day of Week	Time	Case Number	Citation Issued
Multi Vehicle/Property	5/18/2018	Friday	0758	2018-2212	
Multi Vehicle/Property	5/19/2018	Saturday	1434		
Multi Vehicle/Property	5/19/2018	Saturday	1507		
Multi Vehicle/Property	11/20/2018	Tuesday	1329	2018-5127	Stop Sign
Multi Vehicle/Property	8/28/2019	Wednesday	1603	2019-4115	Stop Sign
Multi Vehicle/Property	10/10/2019	Thursday	1307		
Multi Vehicle/Property	1/22/2020	Wednesday	1348		
Multi Vehicle/Property	1/25/2020	Saturday	1135	2020-449	Stop Sign
Multi Vehicle/Property	12/19/2020	Saturday	1647		
Multi Vehicle/Property	12/10/2021	Friday	2240	2021-5584	Right of Way
Multi Vehicle/Property	12/11/2021	Saturday	0855	2021-5590	Right of Way

Based on the eleven crashes reported in the past four years, the majority have occurred on a Saturday, and the afternoon hours were the most reported timeframe. Below is a breakdown of the traffic crashes by day of week and by hour of day.

Crashes by Day of Week



Crashes by Hour of Day

